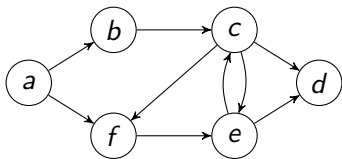


# Tiefensuche in einem Digraphen



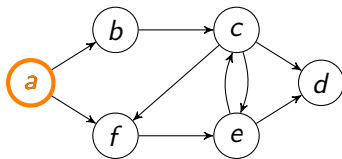
| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
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|                     |  |  |  |
|---------------------|--|--|--|
| $a \leftrightarrow$ |  |  |  |
|---------------------|--|--|--|

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
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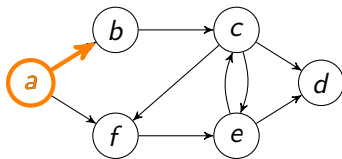
# Tiefensuche in einem Digraphen



|                     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            |               |     |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
|            |                |               |     |

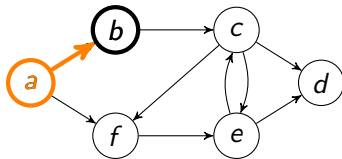
# Tiefensuche in einem Digraphen



|                     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      |     |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
|            |                |               |     |

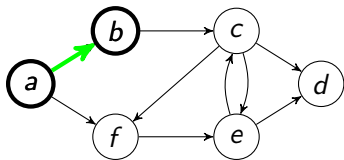
# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
|            |                |               |     |

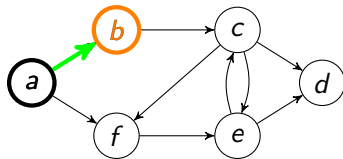
# Tiefensuche in einem Digraphen



| Keller $S$                    | bes.<br>Knoten | bes.<br>Kante | neu |
|-------------------------------|----------------|---------------|-----|
| $a \leftrightarrow$<br>$a, b$ | $a$            | $(a, b)$      | $b$ |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
|            |                |               |     |

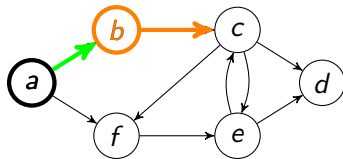
# Tiefensuche in einem Digraphen



| Keller $S$                    | bes.<br>Knoten | bes.<br>Kante | neu |
|-------------------------------|----------------|---------------|-----|
| $a \leftrightarrow$<br>$a, b$ | $a$<br>$b$     | $(a, b)$      | $b$ |

|  | bes.<br>Knoten | bes.<br>Kante | neu |
|--|----------------|---------------|-----|
|  |                |               |     |

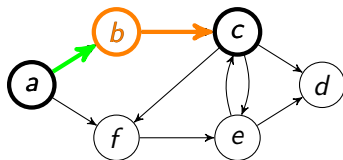
# Tiefensuche in einem Digraphen



| Keller $S$                    | bes.<br>Knoten | bes.<br>Kante        | neu |
|-------------------------------|----------------|----------------------|-----|
| $a \leftrightarrow$<br>$a, b$ | $a$<br>$b$     | $(a, b)$<br>$(b, c)$ | $b$ |

|  | bes.<br>Knoten | bes.<br>Kante | neu |
|--|----------------|---------------|-----|
|  |                |               |     |

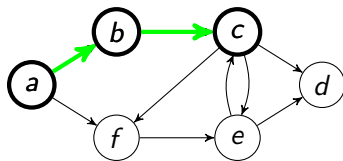
# Tiefensuche in einem Digraphen



| Keller $S$                    | bes.<br>Knoten | bes.<br>Kante        | neu        |
|-------------------------------|----------------|----------------------|------------|
| $a \leftrightarrow$<br>$a, b$ | $a$<br>$b$     | $(a, b)$<br>$(b, c)$ | $b$<br>$c$ |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
|            |                |               |     |

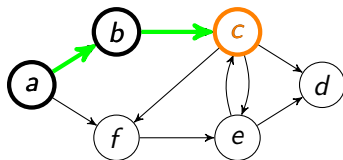
# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           |                |               |     |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
|            |                |               |     |

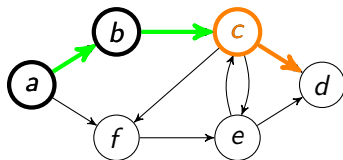
# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            |               |     |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
|            |                |               |     |

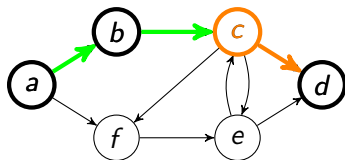
# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      |     |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
|            |                |               |     |

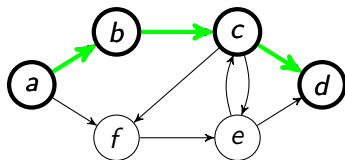
# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |

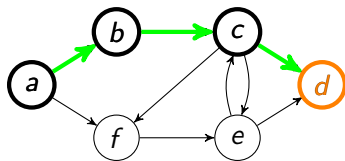
| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
|            |                |               |     |

# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        |                |               |     |

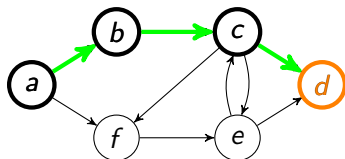
# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            |               |     |

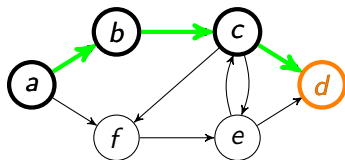
| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
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# Tiefensuche in einem Digraphen



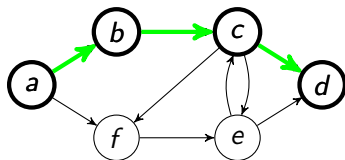
| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu | Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |            |                |               |     |
| $a, b$              | $b$            | $(b, c)$      | $c$ |            |                |               |     |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |            |                |               |     |
| $a, b, c, d$        | $d$            | -             |     |            |                |               |     |

# Tiefensuche in einem Digraphen



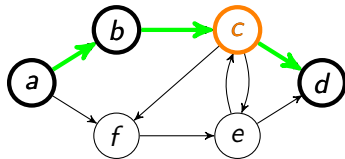
| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |

# Tiefensuche in einem Digraphen



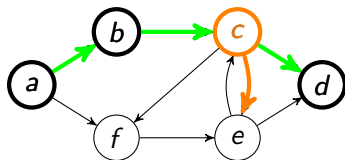
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|----------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |          |                |               |     |
| $a, b$              | $b$            | $(b, c)$      | $c$ |          |                |               |     |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |          |                |               |     |
| $a, b, c, d$        | $d$            | -             | -   |          |                |               |     |
| $a, b, c$           |                |               |     |          |                |               |     |

# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu | Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |            |                |               |     |
| $a, b$              | $b$            | $(b, c)$      | $c$ |            |                |               |     |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |            |                |               |     |
| $a, b, c, d$        | $d$            | -             | -   |            |                |               |     |
| $a, b, c$           | $c$            |               |     |            |                |               |     |

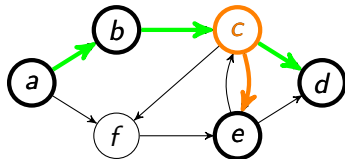
# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      |     |

| Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
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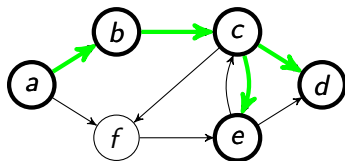
# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
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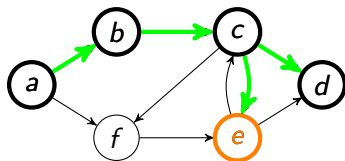
# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |
| $a, b, c, e$        |                |               |     |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
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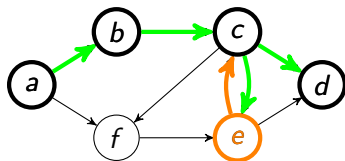
# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |
| $a, b, c, e$        | $e$            |               |     |

| Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|----------|----------------|---------------|-----|
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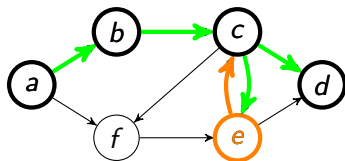
# Tiefensuche in einem Digraphen



| Keller $S$          | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |
| $a, b, c, e$        | $e$            | $(e, c)$      |     |

| Keller $S$ | bes.<br>Knoten | bes.<br>Kante | neu |
|------------|----------------|---------------|-----|
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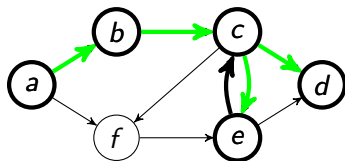
# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |

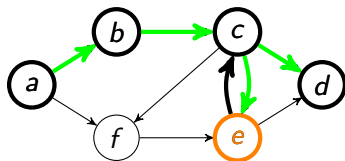
| Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|----------|----------------|---------------|-----|
|          |                |               |     |

# Tiefensuche in einem Digraphen



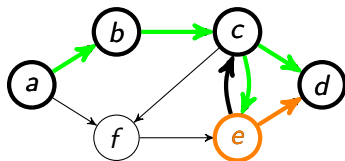
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|----------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |          |                |               |     |
| $a, b$              | $b$            | $(b, c)$      | $c$ |          |                |               |     |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |          |                |               |     |
| $a, b, c, d$        | $d$            | -             | -   |          |                |               |     |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |          |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |          |                |               |     |
| $a, b, c, e$        |                |               |     |          |                |               |     |

# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|----------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |          |                |               |     |
| $a, b$              | $b$            | $(b, c)$      | $c$ |          |                |               |     |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |          |                |               |     |
| $a, b, c, d$        | $d$            | -             | -   |          |                |               |     |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |          |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |          |                |               |     |
| $a, b, c, e$        | $e$            |               |     |          |                |               |     |

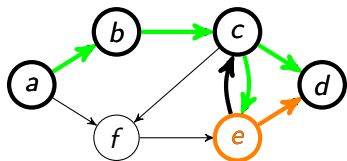
# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |
| $a, b, c, e$        | $e$            | $(e, d)$      |     |

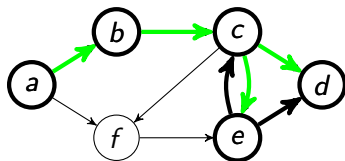
| Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|----------|----------------|---------------|-----|
|          |                |               |     |

# Tiefensuche in einem Digraphen



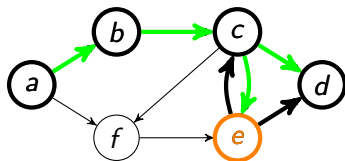
|                     | bes.   | bes.     |     |            | bes.   | bes.  |     |
|---------------------|--------|----------|-----|------------|--------|-------|-----|
| Keller $S$          | Knoten | Kante    | neu | Keller $S$ | Knoten | Kante | neu |
| $a \leftrightarrow$ | $a$    | $(a, b)$ | $b$ |            |        |       |     |
| $a, b$              | $b$    | $(b, c)$ | $c$ |            |        |       |     |
| $a, b, c$           | $c$    | $(c, d)$ | $d$ |            |        |       |     |
| $a, b, c, d$        | $d$    | -        | -   |            |        |       |     |
| $a, b, c$           | $c$    | $(c, e)$ | $e$ |            |        |       |     |
| $a, b, c, e$        | $e$    | $(e, c)$ | -   |            |        |       |     |
| $a, b, c, e$        | $e$    | $(e, d)$ | -   |            |        |       |     |

# Tiefensuche in einem Digraphen



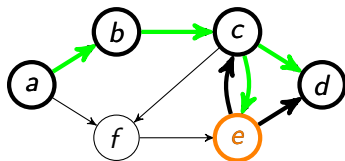
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|----------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |          |                |               |     |
| $a, b$              | $b$            | $(b, c)$      | $c$ |          |                |               |     |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |          |                |               |     |
| $a, b, c, d$        | $d$            | -             | -   |          |                |               |     |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |          |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |          |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |          |                |               |     |
| $a, b, c, e$        |                |               |     |          |                |               |     |

# Tiefensuche in einem Digraphen



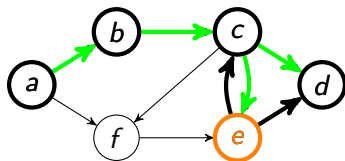
|                     | bes.   | bes.     |     |            | bes.   | bes.  |     |
|---------------------|--------|----------|-----|------------|--------|-------|-----|
| Keller $S$          | Knoten | Kante    | neu | Keller $S$ | Knoten | Kante | neu |
| $a \leftrightarrow$ | $a$    | $(a, b)$ | $b$ |            |        |       |     |
| $a, b$              | $b$    | $(b, c)$ | $c$ |            |        |       |     |
| $a, b, c$           | $c$    | $(c, d)$ | $d$ |            |        |       |     |
| $a, b, c, d$        | $d$    | -        | -   |            |        |       |     |
| $a, b, c$           | $c$    | $(c, e)$ | $e$ |            |        |       |     |
| $a, b, c, e$        | $e$    | $(e, c)$ | -   |            |        |       |     |
| $a, b, c, e$        | $e$    | $(e, d)$ | -   |            |        |       |     |
| $a, b, c, e$        | $e$    |          |     |            |        |       |     |

# Tiefensuche in einem Digraphen



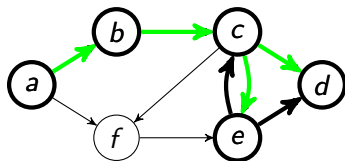
|                     | bes.   | bes.     |     |            | bes.   | bes.  |     |
|---------------------|--------|----------|-----|------------|--------|-------|-----|
| Keller $S$          | Knoten | Kante    | neu | Keller $S$ | Knoten | Kante | neu |
| $a \leftrightarrow$ | $a$    | $(a, b)$ | $b$ |            |        |       |     |
| $a, b$              | $b$    | $(b, c)$ | $c$ |            |        |       |     |
| $a, b, c$           | $c$    | $(c, d)$ | $d$ |            |        |       |     |
| $a, b, c, d$        | $d$    | -        | -   |            |        |       |     |
| $a, b, c$           | $c$    | $(c, e)$ | $e$ |            |        |       |     |
| $a, b, c, e$        | $e$    | $(e, c)$ | -   |            |        |       |     |
| $a, b, c, e$        | $e$    | $(e, d)$ | -   |            |        |       |     |
| $a, b, c, e$        | $e$    | -        |     |            |        |       |     |

# Tiefensuche in einem Digraphen



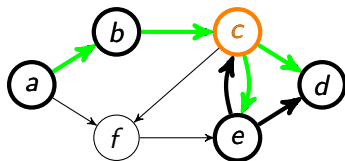
|                     | bes.   | bes.     |     |            | bes.   | bes.  |     |
|---------------------|--------|----------|-----|------------|--------|-------|-----|
| Keller $S$          | Knoten | Kante    | neu | Keller $S$ | Knoten | Kante | neu |
| $a \leftrightarrow$ | $a$    | $(a, b)$ | $b$ |            |        |       |     |
| $a, b$              | $b$    | $(b, c)$ | $c$ |            |        |       |     |
| $a, b, c$           | $c$    | $(c, d)$ | $d$ |            |        |       |     |
| $a, b, c, d$        | $d$    | -        | -   |            |        |       |     |
| $a, b, c$           | $c$    | $(c, e)$ | $e$ |            |        |       |     |
| $a, b, c, e$        | $e$    | $(e, c)$ | -   |            |        |       |     |
| $a, b, c, e$        | $e$    | $(e, d)$ | -   |            |        |       |     |
| $a, b, c, e$        | $e$    | -        | -   |            |        |       |     |

# Tiefensuche in einem Digraphen



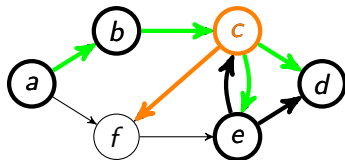
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|----------|----------------|---------------|-----|
| $a \leftrightarrow$ | a              | (a, b)        | b   | a, b, c  |                |               |     |
| a, b                | b              | (b, c)        | c   |          |                |               |     |
| a, b, c             | c              | (c, d)        | d   |          |                |               |     |
| a, b, c, d          | d              | -             | -   |          |                |               |     |
| a, b, c             | c              | (c, e)        | e   |          |                |               |     |
| a, b, c, e          | e              | (e, c)        | -   |          |                |               |     |
| a, b, c, e          | e              | (e, d)        | -   |          |                |               |     |
| a, b, c, e          | e              | -             | -   |          |                |               |     |

# Tiefensuche in einem Digraphen



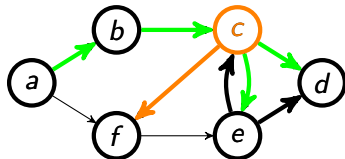
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|----------|----------------|---------------|-----|
| $a \leftrightarrow$ | a              | (a, b)        | b   | a, b, c  | c              |               |     |
| a, b                | b              | (b, c)        | c   |          |                |               |     |
| a, b, c             | c              | (c, d)        | d   |          |                |               |     |
| a, b, c, d          | d              | -             | -   |          |                |               |     |
| a, b, c             | c              | (c, e)        | e   |          |                |               |     |
| a, b, c, e          | e              | (e, c)        | -   |          |                |               |     |
| a, b, c, e          | e              | (e, d)        | -   |          |                |               |     |
| a, b, c, e          | e              | -             | -   |          |                |               |     |

# Tiefensuche in einem Digraphen



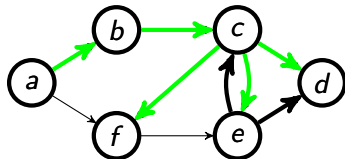
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|----------|----------------|---------------|-----|
| $a \leftrightarrow$ | a              | (a, b)        | b   | a, b, c  | c              | (c, f)        |     |
| a, b                | b              | (b, c)        | c   |          |                |               |     |
| a, b, c             | c              | (c, d)        | d   |          |                |               |     |
| a, b, c, d          | d              | -             | -   |          |                |               |     |
| a, b, c             | c              | (c, e)        | e   |          |                |               |     |
| a, b, c, e          | e              | (e, c)        | -   |          |                |               |     |
| a, b, c, e          | e              | (e, d)        | -   |          |                |               |     |
| a, b, c, e          | e              | -             | -   |          |                |               |     |

# Tiefensuche in einem Digraphen



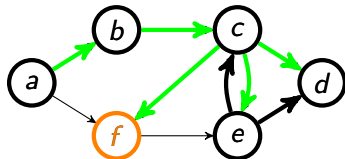
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|----------|----------------|---------------|-----|
| $a \leftrightarrow$ | a              | (a, b)        | b   | a, b, c  | c              | (c, f)        | f   |
| a, b                | b              | (b, c)        | c   |          |                |               |     |
| a, b, c             | c              | (c, d)        | d   |          |                |               |     |
| a, b, c, d          | d              | -             | -   |          |                |               |     |
| a, b, c             | c              | (c, e)        | e   |          |                |               |     |
| a, b, c, e          | e              | (e, c)        | -   |          |                |               |     |
| a, b, c, e          | e              | (e, d)        | -   |          |                |               |     |
| a, b, c, e          | e              | -             | -   |          |                |               |     |

# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S   | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|------------|----------------|---------------|-----|
| $a \leftrightarrow$ | a              | (a, b)        | b   | a, b, c    | c              | (c, f)        | f   |
| a, b                | b              | (b, c)        | c   | a, b, c, f |                |               |     |
| a, b, c             | c              | (c, d)        | d   |            |                |               |     |
| a, b, c, d          | d              | -             | -   |            |                |               |     |
| a, b, c             | c              | (c, e)        | e   |            |                |               |     |
| a, b, c, e          | e              | (e, c)        | -   |            |                |               |     |
| a, b, c, e          | e              | (e, d)        | -   |            |                |               |     |
| a, b, c, e          | e              | -             | -   |            |                |               |     |

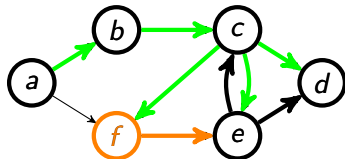
# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |
| $a, b, c, e$        | $e$            | -             | -   |

| Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|--------------|----------------|---------------|-----|
| $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b, c, f$ | $f$            |               |     |

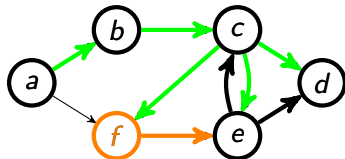
# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |
| $a, b, c, e$        | $e$            | -             | -   |

| Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|--------------|----------------|---------------|-----|
| $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b, c, f$ | $f$            | $(f, e)$      |     |
|              |                |               |     |
|              |                |               |     |
|              |                |               |     |
|              |                |               |     |
|              |                |               |     |

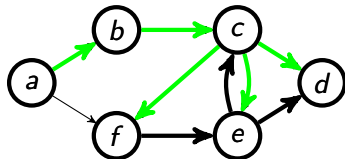
# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ |
| $a, b, c, d$        | $d$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |
| $a, b, c, e$        | $e$            | -             | -   |

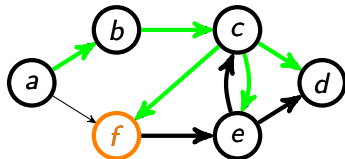
| Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|--------------|----------------|---------------|-----|
| $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b, c, f$ | $f$            | $(f, e)$      | -   |

# Tiefensuche in einem Digraphen



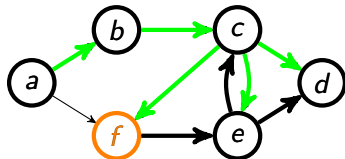
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ |                |               |     |
| $a, b, c, d$        | $d$            | -             | -   |              |                |               |     |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



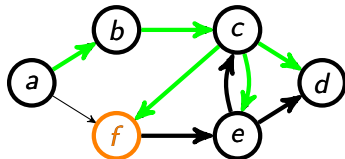
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            |               |     |
| $a, b, c, d$        | $d$            | -             | -   |              |                |               |     |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



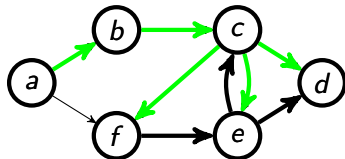
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             |     |
| $a, b, c, d$        | $d$            | -             | -   |              |                |               |     |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



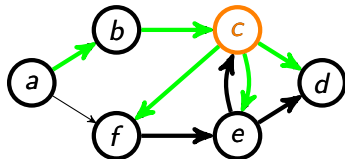
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S   | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|------------|----------------|---------------|-----|
| $a \leftrightarrow$ | a              | (a, b)        | b   | a, b, c    | c              | (c, f)        | f   |
| a, b                | b              | (b, c)        | c   | a, b, c, f | f              | (f, e)        | -   |
| a, b, c             | c              | (c, d)        | d   | a, b, c, f | f              | -             | -   |
| a, b, c, d          | d              | -             | -   |            |                |               |     |
| a, b, c             | c              | (c, e)        | e   |            |                |               |     |
| a, b, c, e          | e              | (e, c)        | -   |            |                |               |     |
| a, b, c, e          | e              | (e, d)        | -   |            |                |               |     |
| a, b, c, e          | e              | -             | -   |            |                |               |     |

# Tiefensuche in einem Digraphen



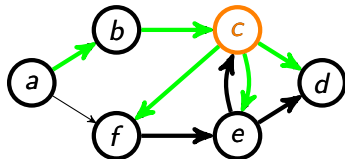
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    |                |               |     |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



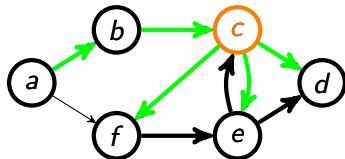
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            |               |     |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



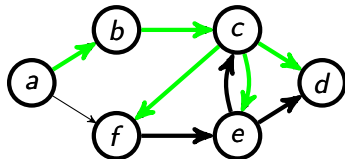
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



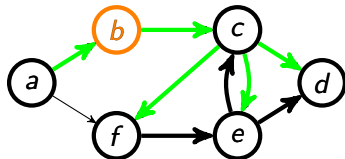
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



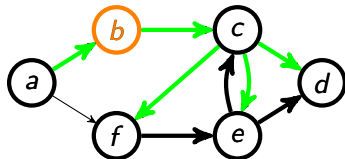
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       |                |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



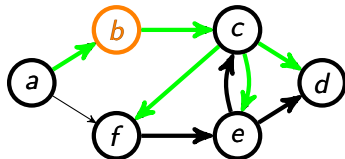
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            |               |     |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



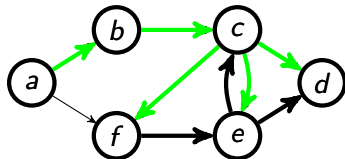
| Keller S            | bes. Knoten | bes. Kante | neu | Keller S     | bes. Knoten | bes. Kante | neu |
|---------------------|-------------|------------|-----|--------------|-------------|------------|-----|
| $a \leftrightarrow$ | $a$         | $(a, b)$   | $b$ | $a, b, c$    | $c$         | $(c, f)$   | $f$ |
| $a, b$              | $b$         | $(b, c)$   | $c$ | $a, b, c, f$ | $f$         | $(f, e)$   | -   |
| $a, b, c$           | $c$         | $(c, d)$   | $d$ | $a, b, c, f$ | $f$         | -          | -   |
| $a, b, c, d$        | $d$         | -          | -   | $a, b, c$    | $c$         | -          | -   |
| $a, b, c$           | $c$         | $(c, e)$   | $e$ | $a, b$       | $b$         | -          |     |
| $a, b, c, e$        | $e$         | $(e, c)$   | -   |              |             |            |     |
| $a, b, c, e$        | $e$         | $(e, d)$   | -   |              |             |            |     |
| $a, b, c, e$        | $e$         | -          | -   |              |             |            |     |

# Tiefensuche in einem Digraphen



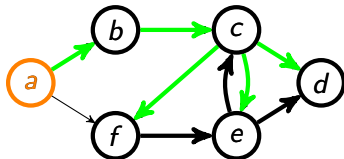
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            | -             | -   |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



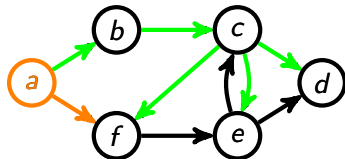
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            | -             | -   |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   | $a$          |                |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



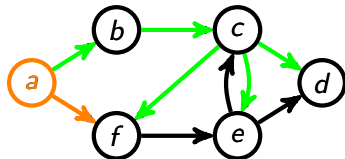
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            | -             | -   |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   | $a$          | $a$            |               |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



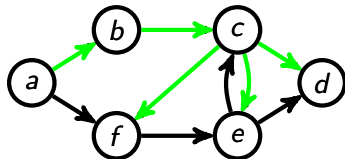
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            | -             | -   |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   | $a$          | $a$            | $(a, f)$      |     |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



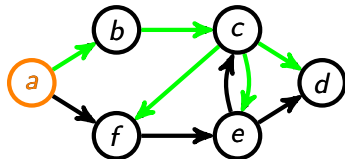
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            | -             | -   |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   | $a$          | $a$            | $(a, f)$      | -   |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   |              |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



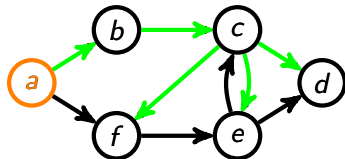
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            | -             | -   |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   | $a$          | $a$            | $(a, f)$      | -   |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   | $a$          |                |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



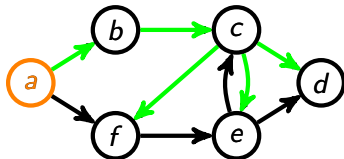
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            | -             | -   |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   | $a$          | $a$            | $(a, f)$      | -   |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   | $a$          | $a$            |               |     |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



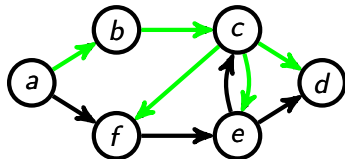
| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            | -             | -   |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   | $a$          | $a$            | $(a, f)$      | -   |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   | $a$          | $a$            | -             | -   |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            | -             | -   |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   | $a$          | $a$            | $(a, f)$      | -   |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   | $a$          | $a$            | -             | -   |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |

# Tiefensuche in einem Digraphen



| Keller S            | bes.<br>Knoten | bes.<br>Kante | neu | Keller S     | bes.<br>Knoten | bes.<br>Kante | neu |
|---------------------|----------------|---------------|-----|--------------|----------------|---------------|-----|
| $a \leftrightarrow$ | $a$            | $(a, b)$      | $b$ | $a, b, c$    | $c$            | $(c, f)$      | $f$ |
| $a, b$              | $b$            | $(b, c)$      | $c$ | $a, b, c, f$ | $f$            | $(f, e)$      | -   |
| $a, b, c$           | $c$            | $(c, d)$      | $d$ | $a, b, c, f$ | $f$            | -             | -   |
| $a, b, c, d$        | $d$            | -             | -   | $a, b, c$    | $c$            | -             | -   |
| $a, b, c$           | $c$            | $(c, e)$      | $e$ | $a, b$       | $b$            | -             | -   |
| $a, b, c, e$        | $e$            | $(e, c)$      | -   | $a$          | $a$            | $(a, f)$      | -   |
| $a, b, c, e$        | $e$            | $(e, d)$      | -   | $a$          | $a$            | -             | -   |
| $a, b, c, e$        | $e$            | -             | -   |              |                |               |     |