Exercises to
Introduction to Bioinformatics

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Overview

• There will be **5-6 assignments**
  - Usually, you have two weeks per assignment

• We build teams of 2 students

• The general scheme looks like this
  - One week
    • **2-3 presentations** of results of previous assignment
      - Groups that present results are drawn at random
      - This means: Every group needs to prepare a short, informal presentation for every assignment
    • Discussion of new assignment
      - Next week: Questions, … lecturer available

• All data, slides etc. will be on the web
Passing the Course

• Being admitted to the exam
  - Every group need to pass all but one assignment to be admitted to the exam
  - Students in the same groups pass or fail together
  - Every assignment consists of a number of tasks, each giving a number of points; to pass the assignment, you need to have more than 50% of the points
  - No grades

• Examination
  - Will be oral, app. 30 minutes
  - Dates etc. will be announced in mid January
    • There will be some choice
  - Gives the grade
Character

• Assignments will consist of a mix of the following

  • Theoretical questions (show, argue, prove, devise new method, explain …)

  • Practical implementation
    - You need to be able to program small programs
    - Please use Java (though we actually don’t care)
    - One task will use R – there will be an introduction

  • Use of existing Bioinformatics tools / databases
Topics (might change)

- Substring search in large sequences
- Local alignment
- Hierarchical clustering
- Analysis of gene expression data
- Analysis of protein-protein-interaction networks
- Analysis of metabolic networks
Let’s Group Together

- Gruppe 1: Appelfeller, Haralampiev
- Gruppe 2: Schmidt, Hahn
- Gruppe 3: Pawliczek, Jesinghaus
- Gruppe 4: Farack, Steinocher
- Gruppe 5: Braun, Vollertsen
- Gruppe 6: Lindtner, Grimm
- Gruppe 7: Behrent, Pustogow, Schneider
- Please build these groups in GIYA asap