Writing a Program

Steps in writing Program
- Design Interface
- Create Data Structures
- Functional Decomposition
- Compile, Debug, Test

Steps in Program Execution
- Get Input
- Transform data into information
- Give Output
- Optional Repetition
- Exit

Data Structures
- Base
  - whole numbers
    - int
  - real numbers
    - float, double
  - characters
    - char
- Composite
  - array
- Different kinds
  - struct
- Self-referential
- Linked list

Classes (Java)
- Components
  - Instance Vars.
  - Constructor
  - Methods

Programming Constructs
- Sequence
  - Simply list statements
  - Transfer control using functions
- Decision
  - single value comparison
    - simple if
  - multiple value comparison
    - if-else
- Loop
  - pre-test
  - post-test
  - general & counter
  - while-do
  - do-while
  - for

How computers work
- Needed Background
- Edit, compile, run Process