

# Advanced Programming COEN 11

## Lab 4

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### □ People List - information

- Name
- Age
- Status
  - Age  $\leq$  21 - name of school
  - $21 < \text{Age} < 65$  - salary per month
  - Age  $\geq$  65 - years of retirement

## Lab 4

### □ People List -- commands

- 1 - to input a person
  - Name, Age, Status
- 2 - to delete a person
  - Name
- 3 - to show the current list of info
- 4 - to quit

## Lab 4

### □ Your program has 1 array of structures

#### ➤ Each struct has three members

- name - char array
- age -- int
- status - union (type depends on age)
  - Each union has three members
    - » school name (age  $\leq$  21) - char array
    - » salary per month ( $21 < \text{age} < 65$ ) - float
    - » year of retirement (age  $\geq$  65) - int

## Lab 4

- Your program keeps a counter, which indicates how many elements are in the list
- According to the command, the program
  - 1 - insert an element at the position indicated by counter and increase the counter
  - 2 - delete the element with the given name
    - to keep all the elements together, copy the last one to the deleted one and decrease the counter
  - 3 - show all the elements, from position zero to counter-1
  - 4 - quit

## Lab 4

- Requirements
  - 1 array of structures
    - one of the members in the struct is a union
  - Global variables:
    - array and counter **ONLY!!**
  - 4 functions:
    - main, insert, delete, show