

# Assignment 10: Program on using Structures

- This assignment further explores structures.
  - Write a program which declares the structures
    - *typedef struct{ float real; float imag}complex\_rect;*
    - *typedef struct{ float mag; float angle}complex\_polar;*
  - Write functions to implement complex addition and subtraction using *complex\_rect*
  - Write functions to implement complex multiplication and division using *complex\_polar*
  - Write functions to implement conversion from rect to polar and vice versa
  - The main program asks user to input two complex numbers in rectangular format and *int status* value between 0 and 4.

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- If `status==0`, exit printing the input values in  $x+jy$
- If `status==1`, exit printing sum of two input values in  $x+jy$
- If `status==2`, exit printing difference of two input values in  $x+jy$
- If `status==3`, exit printing multiplication of two input values in  $x+jy$
- If `status==4`, exit printing division of two input values in  $x+jy$

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- Programs are due on Sunday, Nov 10, 2019, at 5:00 pm.