

### Exercise 1 :

Create class Account that contains the following :

// attributes

- Id
- Name
- Balance

// methods

- Constructors ( default , parametrized , copy constructor )
- Setters & getters
- setData()
- printInfo() => print Account information
- TransferTo() => transfer particular amount of money to another account

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### Exercise 2 :

Create class Student that contains the following :

// attributes

- Id
- Name
- Marks[5]

// methods

- Default constructor
- Parameterized constructor => Student(int i,string n)
- setId , getId
- setName . getName
- read\_marks() => method that read 5 numbers from users and then store each number in marks array => read student marks
- printInfo() => method print student's information ( id and name and avg)
- calc\_avg() => method that calc student avg and return it

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Define function get\_max() , pass your array of objects to the function , and return the student that has maximum gpa .

In main :

- Define an array of 3 elements of type Student .
  - Ask the user to enter their information .
  - Print information for the student that has a maximum gpa .
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### Exercise 3 :

- Create class Point , with the following members : x , y ( integers value)
- It will contains ( int x , int y ) => attributes
- Constructors
- Setters and getters
- Create class Circle that consist of following attributes and methods:
- Center ( point )
- Radius ( double )
- // methods
- Constructors
- Setters and getters
- calcArea() => method calc area of circle and return it

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In main :

- Define 2 variables named circle1,circle2 of type Circle then copy contents of circle1 to circle2 and print its area .

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### Exercise 4 :

Create Shape class

Att => float height

Methods => setters , getters ,

int calcArea() {return 0;}

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Create class Rectangle => inherits from Shape

Att => width

Methods => setters , getters , calcArea() => width\*height

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Create class Triangle => inherits from Shape

Att => Base

Methods => setters , getters , calcArea() => 0.5\*base\*height