

OBJECTIVES : Classes, Constructors, Object Creation

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Q1.

- a) Create the following class **"Player"** with its data members and one member method initialize() that will initialize the data members with the following values;

name = null;
 type = null;
 highscore = 0.0;

Player
name: String
type: String
highscore: double
initialize(): void

PlayerMain_a
main(String[]): void

Create another class as **"PlayerMain_a"**, in main method, it will create an object from Player class, initialize its content by invoking initialize() method and then display the content of Player object via System.out.println() method.

Output:

Name: null
 Type: null
 High Score: 0.0

- b) Create a new Project for part b, then make the following changes;

Player
name: String
type: String
highscore: double
Player()
Player(String)
Player(String, double)
Player(String, String, double)

PlayerMain_b
main(String[]): void

- No-arg constructor; assigns the data members to its given values;
 name = "MrDOOM93";
 type = "Premium";
 highscore = 788.49;

Create **PlayerMain_b** class; in main method, create four **Player** objects and display them as in the example run.

```
Player p1 = new Player ();
Player p2 = new Player ("KittenLove", "Regular", 994.81);
Player p3 = new Player ("TNTisMyBro", "Premium", 834.00);
Player p4 = new Player ("IamNotAGamer", "Regular", 755.26);
```

```
System.out.println("Name: " + p1.name);
System.out.println("High Score: " + p1.highscore);
System.out.println("Type: " + p1.type);
...
```

Output:

Name: MrDOOM93
High Score: 788.49
Type: Premium

Name: TNTisMyBro
High Score: 834.00
Type: Premium

Name: KittenLove
High Score: 994.81
Type: Regular

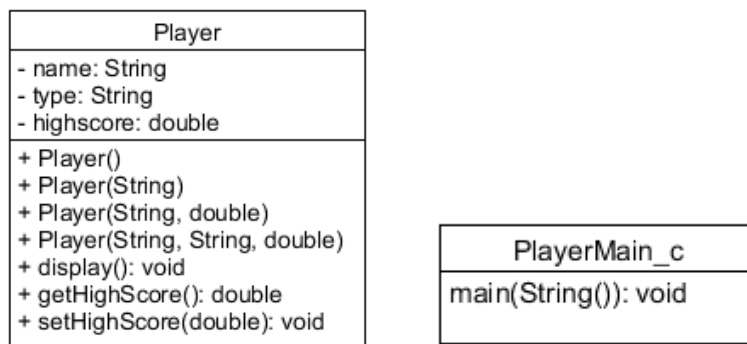
Name: IamNotAGamer
High Score: 755.26
Type: Regular

- Change the high score of the first object to "934.44" then display the content again.
p1.highscore= 934.44;
System.out.println("\nThe new high score of the player 1 object is " + p1.highscore);

Output:

...
nThe new high score of the player 1 object is 934.44

Q2 . Modify **Q1.b** according to the given UML diagram by adding necessary visibility modifiers.

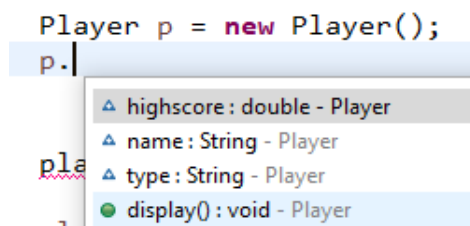


- Write a method named as **display()** which will display the content of the related object.

Create another class as **PlayerMain_c** class,

- First try to change the high score of an object created from the no-arg constructor.
- You will notice that, this time the high score variable is **not** accessible. In order to reach the data members, you have to implement getters/setters as shown in the UML class diagram above.

Use display() method to get the information of the related object. To invoke this method, in the main you can examine the below screenshot.



Change Player object's frequency to "673.00" and get the following output.

```
Player player = new Player();
player.setHighScore (673.00);
System.out.println("\nHigh Score of the object is " + player.getHighScore());
```

Output:

Name: MrDOOM93
High Score: 788.49
Type: Premium

High Score of the object is 673.