



Java Programming

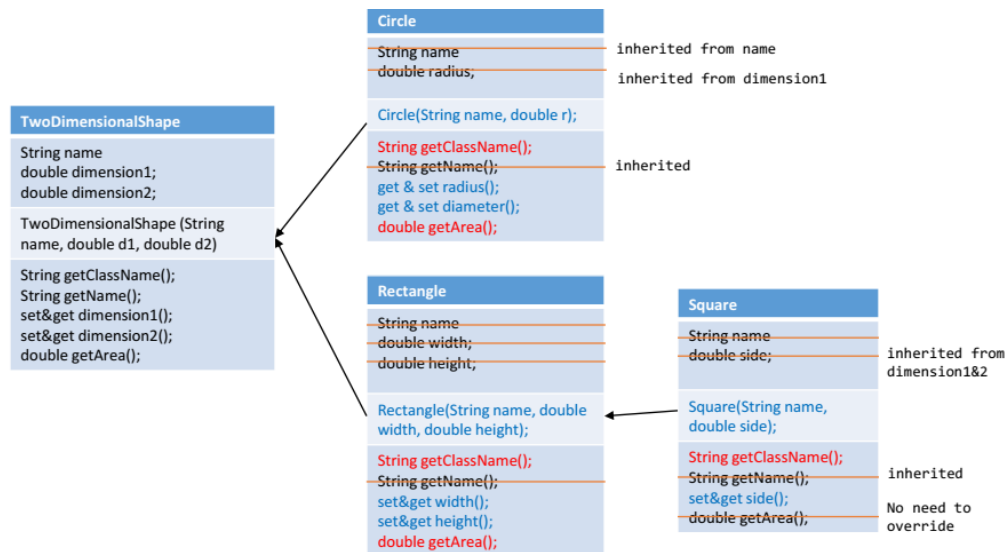
Assignment 4

Task

- Objective:
 - Use inheritance to create hierarchies of related classes
 - Extend behavior and override existing behavior
- To Do:
 - Create the hierarchies with classes: **Application**, **WebApp**, **MobileApp**, **iOSApp**, **AndroidApp**, **DesktopApp**, **WindowsApp**, **MacOSApp**, **LinuxApp**.
 - Implement constructor for all classes.
 - Application should have **name**, **platform**, **developer**, **release date**.
 - WebApps have **URL**, **Hosting Provider**. MobileApps have **OS Version**. DesktopApps have **resolution**.

Application Class hierarchy

- Design **superclasses** to store **common characteristics**
- Design the **subclasses** to store **specialized characteristics**
- Draw the class diagram of your program and submit it with your code
- Your diagram should look like this (*JavaLab05.pdf, slide#8*):



Some part of main function in Tester.class

- It is only part of main function as an example.
- You have to create other classes' objects as well (AndroidApp, MacOSApp, LinuxApp) and display information on the console

```
WebApp reddit = new WebApp("Reddit","www.reddit.com", "Bluehost");
reddit.setReleaseDate(23, 07, 2005);

System.out.printf("** * * %s * * *\nRelease Date: %s\nURL: %s\n"
    + "Platform: %s\n",
    reddit.getName(),reddit.getReleaseDate(),
    reddit.getURL(), reddit.getPlatform() );

iOSApp clashroyale = new iOSApp("Clash Royale", 12.04, "iTunes Store");
clashroyale.setReleaseDate(4, 01, 2016);

System.out.println();
System.out.printf("** * * %s * * *\nAvailable in %s\nRelease Date: %s\n"
    + "Platform: %s v%.2f\n",
    clashroyale.getName(),clashroyale.getDistributor(),
    clashroyale.getReleaseDate(),
    clashroyale.getPlatform(),clashroyale.getOSversion());

WindowsApp skype = new WindowsApp("Skype", "1920x1080");
skype.setReleaseDate(29, 8, 2003);

System.out.println();
System.out.printf("** * * %s * * *\nRelease Date: %s\nPlatform: %s, "
    + "Resolution: %s\n",
    skype.getName(),skype.getReleaseDate(),
    skype.getPlatform(),skype.getResolution());
```











```
* * * Reddit * * *
Release Date: July 23, 2005
URL: www.reddit.com
Platform: Web

* * * Clash Royale * * *
Available in iTunes Store
Release Date: January 4, 2016
Platform: iOS v12.04

* * * Skype * * *
Release Date: August 29, 2003
Platform: Windows, Resolution: 1920x1080
```

Remarks

- You will be graded according to your class design(amount of redundant code, right hierarchy etc.)
- Better class design -> better score
- Use concepts of polymorphism and abstract classes if needed for a better design
- You should have these classes (some of them may be interfaces):

- >  AndroidApp.java
- >  Application.java
- >  DesktopApp.java
- >  iOSApp.java
- >  LinuxApp.java
- >  MacOSApp.java
- >  MobileApp.java
- >  Tester.java
- >  WebApp.java
- >  WindowsApp.java

Questions

- If you have difficulties with submission or understanding the task, you can contact me

- nazarov7mu@gmail.com 

- [@nazarov7mu](#)   