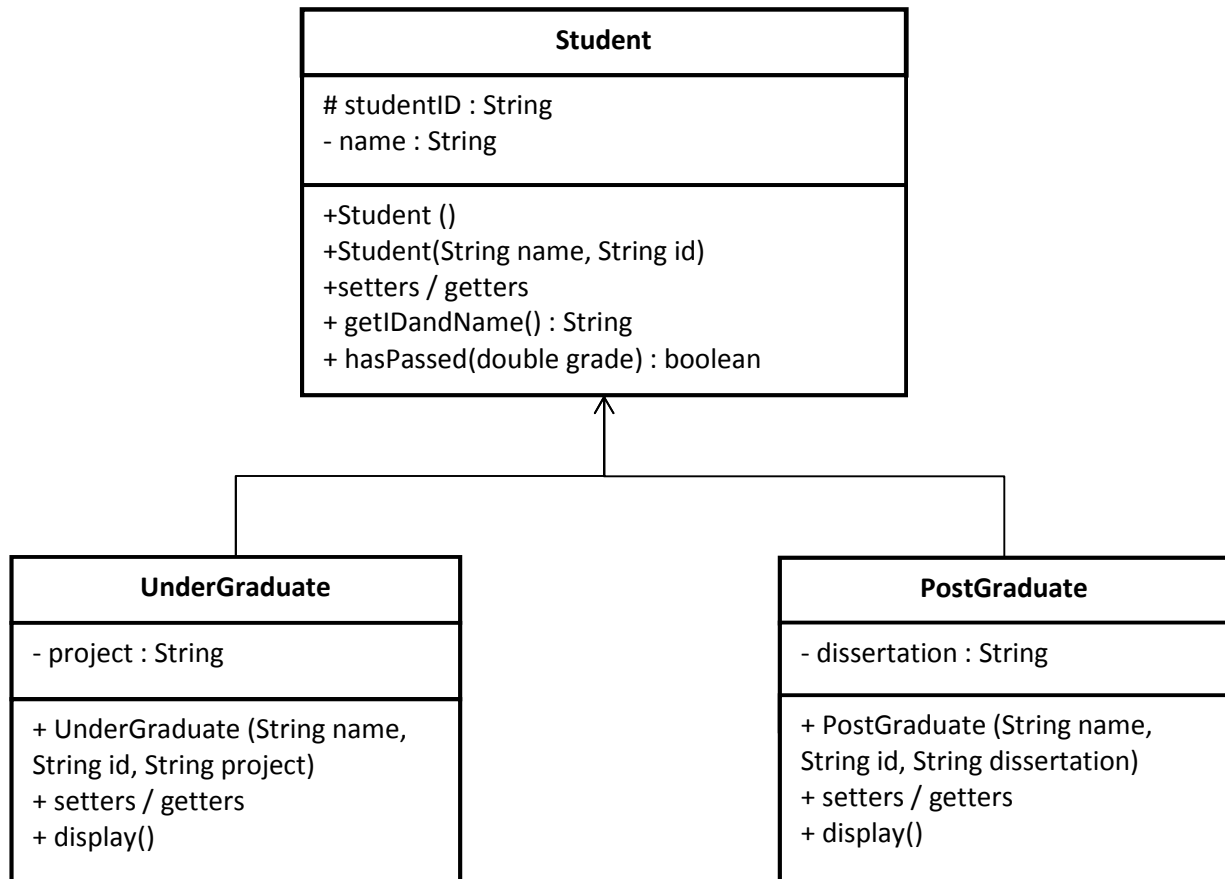


**King Saud University**  
**College of Computer and Information Sciences**  
**Lab 5 Inheritance and abstract classes**



**UnderGraduate**

*project*: title of graduation project.

*Getter & Setter*: Create the get and set method to each attribute.

*Display*: show Under Graduate student info.

*hasPassed* :if grade is  $\geq 60.0$  then the method returns true otherwise false.

**Student**

*Getter & Setter*: Create the get and set method to each attribute.

*getIDandName*: return id and Name in the following format:  
 Student ID: 12 - Name: XY

*hasPassed* :abstract method.

**PostGraduate**

*Dissertation*: Title of *dissertation*.

*Getter & Setter*: Create the get and set method to each attribute.

*Display*: show Post Graduate student info.

*hasPassed* :if grade is  $\geq 80.0$  then the method returns true otherwise false.

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Once you are done writing the classes, you need to test your work by implementing the class Lab5 with main method. There is no need to ask the user to enter the objects information; you can enter the information to create the objects in the constructors.

**Lab5 Class:**

1. Create an UnderGraduate and a PostGraduate object with the proper values of the attributes.
2. Display the result as returned by the hasPassed method for each of the object, if student passed show a message stating that and vice versa if not.

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**Early Blackboard submission:**

- Submit the .java files in a zip format.  
File -> Export -> General (archive file) -> select .java files from src folder.
- Submit screenshots of the actual run from the console.

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**Helpful tips and hints:**

- To auto generate Getters and setters go to  
Source -> Generate Getter and Setter
- To invoke the Auto Formatter for your code : Ctrl + Shift + F
- For auto complete: Ctrl + space
- To Undo: Ctrl + z  
To Copy: Ctrl + c  
To Paste: Ctrl + v  
To Save: Ctrl + s
- - private, + public, # protected.