

### Experiment No: 06

**Aim:** Implementation of a Java Program to demonstrate use of function overriding using a java application

#### Theory:

Function Overriding and Function Overloading

Learn more at : <https://www.geeksforgeeks.org/overriding-in-java/>

**Problem Statement :** A university has two types of students — graduate students and research students. The University maintains the record of name, age and program of every student. For graduate students, additional information like percentage of marks and stream, like science, commerce, etc. is recorded; whereas for research students, additionally, specialization and years of working experience, if any, is recorded. Each class has a constructor. The constructor of subclasses makes a call to constructor of the superclass. Assume that every constructor has the same number of parameters as the number of instance variables. In addition, every subclass has a method that may update the instance variable values of that subclass. All the classes have a function `display_student_info()`, the subclasses must override this method of the base class. Every student is either a graduate student or a research student. Perform the following tasks for the description given above using Java :

- (i) Create the three classes with proper instance variables and methods, with suitable inheritance.
- (ii) Create at least one parameterized constructor for each class.
- (iii) Implement the `display_student_info()` method in each class.

**Implementation : Use following implementation**

[\[https://github.com/profanup/JavaSBL2023/blob/main/codes/Module3/ModuleIII\\_code3.java\]](https://github.com/profanup/JavaSBL2023/blob/main/codes/Module3/ModuleIII_code3.java)

**Explain Code :** [Explain various classes and sub classes in implementation ]

**Conclusion :** Thus we have studied concept of method overriding in Java