

# Day 9 Java Assignment

Q1) Create a Student bean class having the following properties

**Instance variables:**

private roll: int  
private String name  
private int marks  
private char grade

**Provide suitable constructors, and following methods:**

public displayDetails(): void  
private calculateGrade(): char

if marks  $\geq$  500 : Grade is A  
if marks  $<$  500 and  $\geq$  400 : Grade is B  
if marks  $<$  400 : Grade is C

Override the toString() method to print all the details of Student class.  
inside the displayDetails() method, create the Student class object by taking (roll, name, marks ) from the user and call the calculateGrade() method to get the Grade of the Student.

Create another class Demo in which create two Student objects, and invoke the displayDetails(). It should also display the student grade.

Q2)

Define a Java class Parent with the following 3 methods:

method1(): void  
method2(): void  
method3(): void

And the following **Final** filed:

number: integer

Make sure that method1() must be overridden inside the child class. Make sure that method2() can not be overridden inside the child class.

The method3() may or may not be overridden inside the child class.

Define method4() method inside the child class.

Make sure nobody can extend the child class.

While creating the child class object of the above class, take a positive number from

the user between the range of 1 to 10, and initialize the value of the number variable of the parent class otherwise print "Invalid number".From method1() print the value of the number variable.

Call method1(), method2(), method3() and method4() from the parent class variable.

**Note:** Inside each method body mention this method belongs to which class

Q3) Why is multiple inheritance not supported in Java at class level ?