**Lab 03**

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**General instructions:**

Create a java application project naming the java file as Lab03\_2B\_ID where ID is your student ID. The example snippets will use the general class name Lab03\_2B without the ID portion. If there are multiple tasks, you don’t have to create separate projects for each task. A single project file should contain all the .java files that would be necessary to satisfy all the tasks given here.

Alternately, you can submit just the required .java files (without the project). Be sure to name the .java file with the main function as Lab03\_2B\_ID.java.

**Tasks:**

The following is the public class that contains the main function:

import java.util.\*;  
public class Lab03\_2B  
{  
 public static void main(String[] args)  
 {  
 Scanner sc = new Scanner(System.in);  
 Student[] st = new Student[100];  
   
 int choice=0;  
 int y, d, p;  
 int i;  
 String id;  
   
 while(choice != -1)  
 {  
 System.out.println("Enter 1 to add student");  
 System.out.println("Enter 2 to verify student");  
 System.out.println("Enter -1 to terminate program");  
   
 choice = sc.nextInt();

if(choice==1)  
 {  
 System.out.println("Enter student info");  
 System.out.println("-------------------");  
   
 System.out.print("Enter year of admission: ");  
 y = sc.nextInt(); *//check whether the year is valid or not* System.out.print("Enter Dept ID: "); *// 1, 2, 3* d = sc.nextInt(); *//check whether the dept id is within 1 - 3* System.out.print("Enter Programme ID: "); *// 1, 2, 3* p = sc.nextInt(); *//check whether the prog id is within 1 - 3* i = Student.count;  
 st[i] = new Student();

st[i].set\_year(y);  
 st[i].set\_dept(d);  
 st[i].set\_prog(p);  
 st[i].create\_ID();  
   
 System.out.println("Student record entered successfully!");  
 }  
 else if(choice==2)  
 {  
 System.out.print("Enter student ID: ");  
 id = sc.nextLine();  
 Student.check\_ID(id);  
 }  
 }  
 System.out.println("Total number of students in system: " + Student.count);  
 }  
}

JAVA

You can copy paste the above code to create the Lab01\_2B\_ID class.

Your task is to create the Student class by yourself and define the required constructor and methods that are being called inside the main function.

The input for the student info should be checked to see whether they are all correct. If not, then it should be handled accordingly so as to always create student records with valid information.

* Year values cannot be negative, and it should be within an acceptable range
* Dept ID can be put as 1, 2 or 3. Other inputs cannot be accepted.
* Programme ID can be put as 1, 2 or 3. Other inputs cannot be accepted.

**Hint:** There is one variable and one method inside Student that needs to be declared as **static** in order for it to work as intended.