

Matric Num : CB20012

Section : 03

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- a) Based on the output from Figure 1, write two different constructors for the class Student, one without any parameters and the other with all the necessary parameters. [4 Marks]

ANSWER:

```
private String name;  
private String MatricNo;  
private int yearOfstudy;  
private int numberOfsubj;
```

```
public Student (){
```

```
    name = "null";  
    MatricNo = "null";  
    yearOfstudy = 0;  
    numberOfsubj=0;
```

```
}
```

```
public Student (String initName, String initMatricNo, int initYearOfStudy, int initNumofSubj ){
```

```
    name = initName ;  
    MatricNo = initMatricNo ;  
    yearOfstudy = initYearOfStudy;  
    numberOfsubj = initNumofSubj ;
```

```
}
```

- b) Write a complete code for the class Subject which has the following three data members, at least two constructors, three set methods and one display method. [7 Marks]

ANSWER:

```
Package studentRegistration;
```

```
public class Subject {
```

```
    private String subjectName;
```

```
    private int creditHours;
```

```
    private String subjGrade;
```

```
    public Subject(){
```

```
        subjectName = "null";
```

```
        creditHours = "null";
```

```
        subjGrade = "null";
```

```
    }
```

```
    public String getSubjectName () {
```

```
        return subjectName;
```

```
    }
```

```
    public void setSubjectName (String subjectName) {
```

```
        this.subjectName = subjectName;
```

```
    }
```

```
    public String getCreditHours () {
```

```
        return creditHours;
```

```
    }
```

```
    public void setCreditHours (String creditHours) {
```

```
        this.creditHours = creditHours;
```

```
    }
```

```
    public String getSubjGrade () {
```

```
        return subjGrade;
```

```
    }
```

```
    public void setSubjGrade (String subjGrade) {
```

```
        this. subjGrade = subjGrade;
```

```
    }
```

```
    public void display()
```

```
    { System.out.println(""); }
```

```
    }
```

- c) Write a complete code for the class Subject which has the following three data members, at least two constructors, three set methods and one display method. [7 Marks]

ANSWER:

```
Package studentRegistration;

import java.util.Scanner;

public class studentMain {

    public static void main(String[] args) {

        Student mystudent = new Student ();
        Subject mysubject = new Subject ();

        Scanner input = new Scanner(System.in);

        System.out.print("Please enter the student's name : ");
        mystudent.setName(input.nextLine());
        System.out.print("Please enter the student matric no : ");
        mystudent.setMatricNo (input.nextLine());
        System.out.print("Please enter the student year of study: ");
        mystudent.setyearOfstudy (input.nextInt());
        System.out.print("Please enter the credit hours for this subject:");
        mystudent.setnumberOfsubj (input.nextInt());

        for ( i=0 ; i <= mystudent.setnumberOfsubj ; i++) {

            System.out.print("Please enter the subject name:");
            mysubject.setSubjectName(input.nextLine());
            System.out.print("Please enter the credit hours for this subject: ");
            mysubject.setCreditHours (input.nextInt());
            System.out.print("Please enter the subject grade:");
            mysubject.setSubjGrade(input.nextLine());

            i++;

        }

        System.out.println("Name: " + mystudent.getName () );
        System.out.println("Matric No: " + mystudent.getMatricNo());
        System.out.println("Year: " + mystudent.getyearOfstudy()+"Subjects Taken : " + mystudent.
        getnumberOfsubj ());

        System.out.println("Subject Name : " + "    Credit Hours : " + "Subject Grade : " );
```

```
System.out.println(mySubject.getSubjectName() + " " + mySubject.getCreditHours() + " "
+ mySubject.getSubjGrade());
```

```
}
```

```
}
```