Lab Assignment # 1 (CLO-4) Best (20)

Name: Zawar Ahmed Nabeel Reg: FA21-BCS-040 (BCS-3A)

Identify the relationship among classes and implement accordingly.

Date Class: -

- Three private instance variables day, month and year of integer type.
- A parametrized constructor.
- A default constructor which assigns 1 to each instance variable.
- Getter and Setter methods
- Override toString() method to return the date in string format.

Course Class: -

- coursename of type String.
- credit_hrs of type integer;
- Parametrized constructor having 2 arguments as course_name and credit_hrs.
- Getter and setter methods for each instance variable.

Student Class: -

- One integer variable to store the student_ID.
- One String variables to store the name.
- Two instance variables to store the information of Course and Registration Date.
- Parametrized Constructor for initializing each instance variable except student_ID. The value of student_ID should be assigned automatically.
- Getter and Setter
- Override method toString() to print the information of the student.

Main Class: -

Create a main class to test the functionalities of student class.

Date Class:

```
public class Date {
    private int day, month, year;
public Date (int day, int month, int year)
  { this.setDay(day);
    this.setMonth(month);
    this.setYear(year); }

public int getDay() {
    return day; }
public void setDay(int day) {
    if (day > 0 && day < 31)
    { this.day = day; }
    else
    { System.out.println("Invalid Day");
      this.day = 0; } }
```

```
public int getMonth()
    { return month; }
public void setMonth(int month)
 { if (month > 0 && month <= 12)
    { this. month = month }
   else
    { system.out.println("Invalid month");
     this.month = 0; }
 }

public int getYear() {
        return year; }

public void setYear (int year) {
   if (year > 0)
   this.year = year;
  else
   { system.out.println ("Invalid year");
       this.year = 0; }

public String toString() {
return String.format ("%02d/%02d/%02d",
          this.getDay(), this.getMonth()
            this.getYear()); }
```

```
public void setCourseName(String courseName)
{ this.courseName = courseName; }

public int getCreditHrs() {
    return creditHrs;
  }

public void setCreditHrs(int creditHrs)
{ if(creditHrs > 0 && creditHrs < 5)
  this.creditHrs = creditHrs;
 }
else
{ system.out.println("Invalid creditHrs");
  this.creditHrs = 0;
}

public String toString()
 { return String.format("%s:%s",
   this.getCourseName(), this.
    getCreditHrs());
```

Course Class:

```
public Class Course {
    private String courseName;
    private int creditHrs;
public Course(String courseName, int creditHrs)
 {
   this.setCourseName(courseName);
   this.setCreditHrs(creditHrs);
 }
public String getCourseName() {
    return courseName;
 }
```

Next Pge.

BCS-3A

(Zawar Ahmed) (FA21-BCS-040)

Student Class

```
public class Student {
    private static int studentID;
    private String studentName;
    private Course cName;
    private Date regDate;

public Student (String studentName, Course cName,
                Date regDate)
{
    studentID ++;
    this.setStudentName (studentName);
    this.setRegDate(regDate);
    this.setcName (cName);
}

public static int getStudentID () {
    return studentID; }

public static void setStudentID (int studentID)
{   Student.studentID = studentID;
}
public String getStudentName () {
    return studentName; }

public void setStudentName (String StudentName)
{   this.studentName = studentName; }

public Course getCName() {
    return cName; }
```

```
public void setcName( Course cName)
    {
        this. cName = cName; }
public Date getRegDate() }
    return regDate;
    {
public void setRegDate (Date regDate) }
        this. regDate = regDate; }

public String toString()
    { return String. format ("St Name: %.S \n St ID %d
      \n RegDate %.S \n Course Infor %.s \n",
      this. getstudentName(), studentID, this. getRegDate.toString()
      , this. getcName(). toString());
    }
```

Main Class:

```
public class TestLabTask1 {
    public static void main ( String[] args)
{
    Date d1 = new Date (15, 4, 2002);
    Course c1 = new ("OOP", 4);
    Stuent S1 = new Student("Ahmed Ali", c1, d1);
     System. out. println (s1);

Date d2 = new Date (4, 4, 2003);
Course C2 = new Course ("IS1", 3);
Student S2 = new Student("Anwar Ali", c2, d2);
     System. out. println (s2);

    }
```

Lab Assignment # 1 (CLO-4) (Avg) 15

Name: Abdul Qadir Reg: SP21-BCS-042

Identify the relationship among classes and implement accordingly.

Date Class: -

- Three private instance variables day, month and year of integer type.
- A parametrized constructor.
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- Getter and Setter methods
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Course Class: -

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- Getter and setter methods for each instance variable.

Student Class: -

- One integer variable to store the student_ID.
- One String variables to store the name.
- Two instance variables to store the information of Course and Registration Date.
- Parametrized Constructor for initializing each instance variable except student_ID. The value of student_ID should be assigned automatically.
- Getter and Setter
- Override method toString() to print the information of the student.

Main Class: -

Create a main class to test the functionalities of student class.

→ Incomplete main class

→ Student class fields improper.

Abdul Qadir
SP21-BCS-042

Lab Assignment

```
Package data ;

Public class course_date_student
 {
   private int day ;
   private int month ;
   private int year ;

   private string coursename ;
   private int credit_hrs ;

   Public int student_ID ;
   Public string name ;

   Public course_date_student ( int student_ID ,
                string name )
   {
     this.student_ID = student_ID ;
     this.name = name ;
   }
                // constructor for student class.

   Public int getStudent_ID ()
   {
     return student_ID ;
   }
```

needs date object as variable

needs course object as variable

no static int type assigned each object will get same student id.

```
Public void setStudent_ID (int student_ID)
{
    this.student_ID = student_ID;
}

Public string getName() {
    return name;
}

Public void setName (string Name)
{
    this.name = name
}

Public course_date_student (sting courseName,
                            int creditHrs) {
this.courseName = courseName;
this.credit_hrs = credit_hrs;
}
                    // constructor for course class.

Public sting getcourseName () {
    return courseName;
}

Public void setcourseName() {
    ~~Return courseName~~ this.courseName = courseName;
}

Public int getCredit_hrs () {
```

```
    return credit_hrs;
}
Public void setCredit_hrs (int credit_hrs)
{
    this. credit_hrs = credit_hrs;
}

Public Course_date_shdnt (int day, int month,
                          int year)
{
    this.day = day;
    this. month = month;
    this. year = year;
}                    // constructor for date
                     // class

Public int getday () {
    return day;

Public Void setDay (int day) {
    this . day = day;
}

Public int getMonth ();
{
    return month;
}

Public void setMonth (int month) {
    this. month = month;
}
```

```
Public int getyear () {
    return year ;
}
Public void setyear (int year) {
    this . year = year ;
}

Public void tostring ()
{
System . out . printf ("%d // %d // %. d", int day,
                    int month , int year) ;
}
```

Main class :-

```
Package date ;

Public class Date {

Public Static void main ( String [ ] args)
{
    d1 = date class 1 ;
    d2 = date class 2 ;
@
System . out . printf (" enter date") ;
System . out . print f (" enter course");
System . out . printf (" enter student info");
}

Public String tostring () {
    return (" Date ", + ) ;
```

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Lab Assignment # 1 (CLO-4) (Worst) 0

Name: Mabir Reg: SP21-BCS-094

Identify the relationship among classes and implement accordingly.

Date Class: -

- Three private instance variables day, month and year of integer type.
- A parametrized constructor.
- A default constructor which assigns 1 to each instance variable.
- Getter and Setter methods
- Override toString() method to return the date in string format.

Course Class: -

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- Getter and Setter
- Override method toString() to print the information of the student.

Main Class: -

Create a main class to test the functionalities of student class.

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