CS105 - Lab2

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Exercise

Please create a class named Students, that includes four instance variable - a first name (type String), a last name (type String), a major (type String), a Student ID (type int). Provide a constructor that initialize four instance variables. Provide a set and get method for each instance variable. Write a test app named Main that demonstrates class Student's capabilities. Please, create toString method to print Student objects.

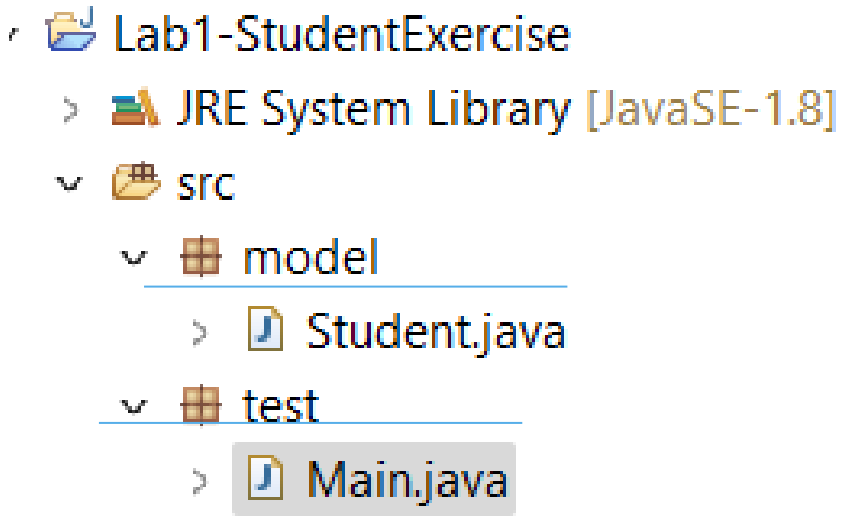
- Please, create in Main class a Students array that has five students. by taking inputs by user instantiate created array. (Hint: For-loop - inside for-loop, inputs are taken).

- Search Student by name: take a name as an input from User and print student if exist. If student not exist, then give a plausible output. (Hint: Searched student not found + name)

This is not whole answer.
There are gaps in program!!!

Packages

As you can see, there are a structure in our program.



Scanner & taking values

Main.java

```
1  package test;
2
3  /**
4   * @author Ş. Görkem Okur
5   */
6
7  import java.util.*;
10
11
12 public class Main {
13
14     public static void main(String[] args) {
15
16         Scanner scan = new Scanner(System.in);
17
18         Student students[] = new Student[5];
19
20
21         for (int i = 0; i < 3 ; i++) {
22
23             System.out.print("Please enter name of student: ");
24             String name = scan.next();
25
26             System.out.print("Please enter surname of student: ");
27             String surname = scan.next();
28
29             System.out.print("Please enter student ID of student: ");
30             int sID = scan.nextInt();
31
32             System.out.print("Please enter major of student: ");
33             String major = scan.next();
34
35             students[i] = new Student(name, surname, major, sID);
36         }
37
```

Searching – Do you think is there unnec…?

Main.java

```
32          System.out.print("Please enter major of student: ");
33          String major = scan.next();
34
35          students[i] = new Student(name, surname, major, sID);
36      }
37
38
39      for (int i = 0; i < students.length; i++) {
40          System.out.println( "Student - " + (i + 1) + System.lineSeparator() + students[i] );
41      }
42
43
44      System.out.print("Please enter name of student that you want to search: ");
45      String name = scan.next();
46
47      int foundStudents = 0;
48
49      for (int i = 0; i < students.length; i++) {
50          if( students[i] != null && name.equals( students[i].getName() ) )
51              foundStudents++;
52      }
53
54      if(foundStudents > 0){
55
56          System.out.println(
57                  foundStudents +
58                  " student" + (foundStudents > 1 ? 's' : "") +
59                  " are found with name: " + name
60          );
61
62          for (int i = 0; i < students.length; i++) {
63              if( students[i] != null && name.equals( students[i].getName() ) )
64                  System.out.println(students[i]);
65          }
66      }else{
```

End of class

```
61
62              for (int i = 0; i < students.length; i++) {
63                  if( students[i] != null && name.equals( students[i].getName() ) )
64                      System.out.println(students[i]);
65              }
66          }else{
67              System.out.println( "Searched student not found " + name);
68          }
69
70          /*...*/
71
72      }
73
74  }
75
```

Student Class

```
package model;

import java.util.Objects;

/**
 * @author Ş. Görkem Okur
 */

public class Student {

private String name;
private String surname;
private String major;
private int studentID;



public Student(String name, String surname, String major, int studentID) {
this.name = name;
this.surname = surname;
this.major = major;
this.studentID = studentID;
}
```

Student Class

```
public String getName() { return name; }

public String getSurname() { return surname; }

public String getMajor() { return major; }

public int getStudentID() { return studentID; }

public void setName(String name) {
      this.name = name;
}
```

Student Class

```
public void setSurname(String surname) {
      this.surname = surname;
}


public void setMajor(String major) {
      this.major = major;
}


public void setStudentID(int studentID) {
      this.studentID = studentID;
}
```

Student Class

```
@Override
public String toString() {
    return "Name: " + name + System.lineSeparator() +
           "Surname: " + surname + System.lineSeparator() +
           "Major: " + major + System.lineSeparator() +
           "Student ID: " + studentID + System.lineSeparator() ;
}
```

Student Class

```
@Override
public boolean equals(Object obj) {
    return true;
}
```

Thank You For Your patience

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