



Department of Computer Science & Engineering  
UNIVERSITY OF LIBERAL ARTS  
BANGLADESH

# University of Liberal Arts Bangladesh

**Course Code: CSE 413**

**Course Title: Programming with Java Lab**

## **Experiment 2**

### **Submitted To**

Dr. Mohammed Ashikur Rahman

Assistant Professor

Department of Computer Science and Engineering

University of Liberal Arts Bangladesh

### **Submitted By**

**Farjahan Akter Bobby**

**ID: 201014007**

## Experiment 2

**Problem Statement:** Mr. X is a new student of CSE department. He is visiting the ULAB main campus for the first time. He is looking for his/her department but he doesn't know where the department is located. He took help from the other students and able to find the department. Then, he/she was unable to find the faculty because he/she doesn't know the room number as well as consultation hour of that faculty.

Develop a program in JAVA that can help that student to locate the department and find the teacher's name including consultation hours for that particular student.

**Objectives:** The main objective of this project is to

1. To take ID number from the student
2. Depending on that ID, display specific department
3. Once enter the student will see the department location.
4. Let the student choose for which course he want consultation.
5. Show allocated teachers for that specific course
6. For that specific teacher display his/her room number and consultation hour.

**Modern Tools:** Apache NetBeans

**Problem Analysis:**

**Control statement:** The whole code could be implemented using the 'if', 'if else' statement. The if statement is used to test the condition. If the condition is true then, the further code will be executed otherwise it will terminate to the next statement.

**String Method:** Two string method will be use here. One is equals(), to check if two string elements are equals or not. If equals then the code will be executed. Another one is substring(), which used to check whether two strings are equals at a certain range of a string.

Basically, in this system, each department will be referred as per the specific range of student's id number. For example, for CSE department it will check if there is 104 from the 3<sup>rd</sup> index to the 5<sup>th</sup> position of the string. If it has then if condition will be executed. Same for the other department. This will be done using those string method. The syntax will be

```
if(user_id.substring(initial_point,last_point_of_required_digit).equals("specific_digit_of_id")){  
<statement>  
}  
else if(user_id.substring(initial_point,last_point_of_required_digit).equals("specific_digit_of_id")){  
<statement>  
}  
else{  
<statement>  
}
```

Once the student enters to the specific department, a course list will be shown. When they will type that course name, a list of all the allocated teacher will be shown. The syntax will be

```

if(user_input.equals(course_name)){
<statement>
}
else if(user_input.equals(course_name)){
<statement>
}
..
else{
<statement>
}

```

In the same way when user will enter the teacher's name, if it matches then the room number and consultation hour of that teacher will be shown.

#### Programming Code:

```

package practice.lab2final;
import java.util.*;
import java.lang.*;
public class Lab2final {
void IDN(String inpt2){
    String s11=new String("Nafees Monsoor");
    String s12=new String("Farhana Sarker");
    String s13=new String("Farjahan Akter");
    String s14=new String("Nahian Raisa");
    String s15=new String("Fuad Akash");
    String s16=new String("Bushra Ahmed");
    String s17=new String("Iqbal Hossain");
    String s18=new String("Apon Ghosh");

    if((inpt2.substring(2,5)).equals("104")) {
        System.out.println("<=====Welcome To the CSE Department=====>\n");
        System.out.println("Department Location: C Building, 3rd Floor");
        String s6=new String("Automata");
        String s7=new String("Algorithm");
        String s8=new String("Java");
        System.out.println("<-----Course List-----> \n1. "+s6+"\n2. "+s7+"\n3. "+s8);
        System.out.println("<-----Choose your course----->");
        Scanner sc1 = new Scanner(System.in);
        String inpt1 = sc1.nextLine();
        if(inpt1.equals(s6)){
            System.out.println("Available Faculties are:\n"+s11+"\n"+s12+"\n<---Choose the faculty--->");
            Scanner sc2 = new Scanner(System.in);
            String inpt3 = sc2.nextLine();
            System.out.println("=====");
            if(inpt3.equals(s11)){

```

```

        System.out.println("Room: PD-312\nConsultation hours: 02:40-4:50");
    }
    else
        System.out.println("Room: PD-311\nConsultation hours: 01:40-2:50");
    }
    else if(inpt1.equals(s7)){
        System.out.println("Available Faculties are:\n"+s16+"\n"+s18+"\n<---Choose the faculty--->");
        Scanner sc2 = new Scanner(System.in);
        String inpt3 = sc2.nextLine();
        System.out.println("=====");
        if(inpt3.equals(s16)){
            System.out.println("Room: PD-310\nConsultation hours: 02:40-4:50");
        }
        else
            System.out.println("Room: PD-311\nConsultation hours: 01:40-2:50");
    }
    else if(inpt1.equals(s8)){
        System.out.println("Available Faculties are:\n"+s14+"\n"+s15+"\n"+s17+"\n<---Choose the faculty--->");
        Scanner sc2 = new Scanner(System.in);
        String inpt3 = sc2.nextLine();
        System.out.println("=====");
        if(inpt3.equals(s14)){
            System.out.println("Room: PD-312\nConsultation hours: 02:40-4:50");
        }
        else if(inpt3.equals(s15)){
            System.out.println("Room: PD-310\nConsultation hours: 02:40-4:50");
        }
        else
            System.out.println("Room: PD-312\nConsultation hours: 01:40-2:50");
    }
}

//-----For other Department-----//
else if((inpt2.substring(2,5)).equals("105")){
    System.out.println("<====Welcome To the EEE Department====>\n");
    System.out.println("Department Location: C Building, 3rd Floor");
    String s19=new String("Digital Electronics");
    String s20=new String("Electronics device");
    System.out.println("<-----Course List-----> \n1. "+s19+"\n2. "+s20);
    System.out.println("Choose your course\n");
    Scanner sc1 = new Scanner(System.in);
    String inpt1 = sc1.nextLine();
    if(inpt1.equals(s19)){
        System.out.println("<----Available Faculties are:---->\n"+s17);
        System.out.println("\nRoom: PD-312\nConsultation hours: 02:40-4:50");
    }
    else if(inpt1.equals(s20)){
        System.out.println("Available Faculties are:\n"+s14+"\n"+s15+"\n"+s17+"\n ---Choose the faculty---");
    }
}

```

```

//Scanner sc2 = new Scanner(System.in);
String inpt3 = sc1.nextLine();
System.out.println("=====");
if(inpt3.equals(s14)){
    System.out.println("Room: PD-312\nConsultation hours: 02:40-4:50");
}
else if(inpt3.equals(s15)){
    System.out.println("Room: PD-310\nConsultation hours: 02:40-4:50");
}
else
    System.out.println("Room: PD-312\nConsultation hours: 01:40-2:50");
}
}
else{
    System.out.println("Please Provide the correct ID");
}
}

//----- Main Function Starts Here-----//
public static void main(String[] args) {
    System.out.println("Can you please help me to find the department location and faculty
room?");
    System.out.println("Your ID please?");
    Scanner sc2 = new Scanner(System.in);
    String inpt2 = sc2.nextLine();
    Lab2final z = new Lab2final();
    z.IDN(inpt2);
    System.out.println("=====");
}
}

```

## Output:

Outcome for CSE Department

```

] --- exec-maven-plugin:3.0.0:exec (default-cli) @ Lab2final ---
Can you please help me to find the department location and faculty room?
Your ID please?
201042154
<=====Welcome To the CSE Department=====>

Department Location: C Building, 3rd Floor
<-----Course List----->
1. Automata
2. Algorithm
3. Java
<-----Choose your course----->
Automata
Available Faculties are:
Nafees Monsoor
Farhana Sarker
<----Choose the faculty---->
Farhana Sarker
=====
Room: PD-311
Consultation hours: 01:40-2:50
=====

```

## Outcome for EEE Department

```
] --- exec-maven-plugin:3.0.0:exec (default-cli) @ Lab2final ---  
Can you please help me to find the department location and faculty room?  
Your ID please?  
201054587  
<=====Welcome To the EEE Department=====>  
  
Department Location: C Building, 3rd Floor  
<-----Course List----->  
1. Digital Electronics  
2. Electronics device  
Choose your course  
  
Electronics device  
Available Faculties are:  
Nahian Raisa  
Fuad Akash  
Iqbal Hossain  
---Choose the faculty---  
Fuad Akash  
=====
```

Room: PD-310  
Consultation hours: 02:40-4:50  
=====

### Conclusion:

Using Apache NetBeans, the whole code was built following the problem statements and problem theory. In this whole problem when the student entered his/her student ID, it first checked of which department he/she is. For example, when the digit of 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> position was 1, 0 and 5 respectively, it showed the display for EEE department. Then there showed 2 courses available. When he/she chosen electronic device, it showed allocated teachers for that course. When the student typed the teachers name, it showed his room number and consultation hour. Thus, the code is running as I have assumed while implementing and fulfil the problem statements.