**SOE Lab July-December 2016**

**Instruction:**

1. **Operating System: Linux.**
2. **IDE: Netbeans**
3. **Database: MySQL**

**Use of other operating system or ide or database will not be entertained. So please prepare your system accordingly.**

**Students will be expected to complete and show during lab hours one assignment per week. The first lab test will be based on these assignments.**

**Assignment 1**

Write a Java code which will read C code/snippet from file “input.c” and perform the following operations:

1. Calculate number of variables of each data type, initialized and non-initialized variables.
2. Calculate number of functions and function name with the arguments.
3. Calculate number of loops.
4. Calculate number of conditional statements.

Write all the output in a file “enrollnumber.txt”.

**Note:**- Make sure that your code reads a c file “input.c” and the output file name is “enrollnumber.txt” (ex:- “iit2014001.txt”).

**Assignment 2**

Our institute needs to maintain a database for students. The database will store information like name, father's name, address, age, mobile number, CGPA.

In addition to this the administration also needs to perform the following tasks on the database:

1. It allows the user to add, delete, edit and update the student's information.
2. It allows the user to search information of a particular student using their unique identification number.
3. Display the names of the students in ascending order based on name and age.

Now write a java code which will do the job for the institute.

**Assignment 3**

Assume some institute wants to create a GUI which will be used to enter records regarding the classes. The record will consist of

1. Attendance of a particular subject.
2. Marks of each class test of a particular subject.

Any Instructor can login into the system using proper credential (login id and password) and update information relevant to the record.

Now write a Java code to design such a GUI.

You can assume that

1. Login id of an Instructor is his/her email id
2. Password is any string of length 6.

Note:-

1. Try to write the GUI code from scratch. Don’t use the Netbean’s drag and drop utility.

**Assignment 4**

In our previous assignment we have created a GUI for Instructors that allows them to enter various records regarding classes.

Now we want to extend the facility for students. A student can view his/her class attendance and marks by login in the portal.

Assume that

1. A student can take maximum 3 subjects in a semester.
2. Login id is roll no of that student.
3. Password is any string of length 6.

In addition to this also add some administration privilege for the created database so that Dean of the institute can access all the information using his/her credentials for a specific class.