

**INFORMATION & COMMUNICATION TECHNOLOGY DEPARTMENT**  
**SESI 2: 2022/2023**  
**FINAL ASSESSMENT: PRACTICAL TEST**

<b>COURSE CODE:</b> DFP50273
<b>COURSE NAME:</b> INTEGRATIVE PROGRAMMING AND TECHNOLOGIES
<b>DURATION:</b> 2 HOURS
<b>NAME :</b> GURMIT SINGH
<b>REGISTRATION NUMBER :</b> 10DDT21F1022
<b>CLO1:</b> Construct the elements of GUI from java package that integrates database for an interactive GUI application ( <b>P4, PLO 3</b> )

**SECTION A: 100 MARKS**

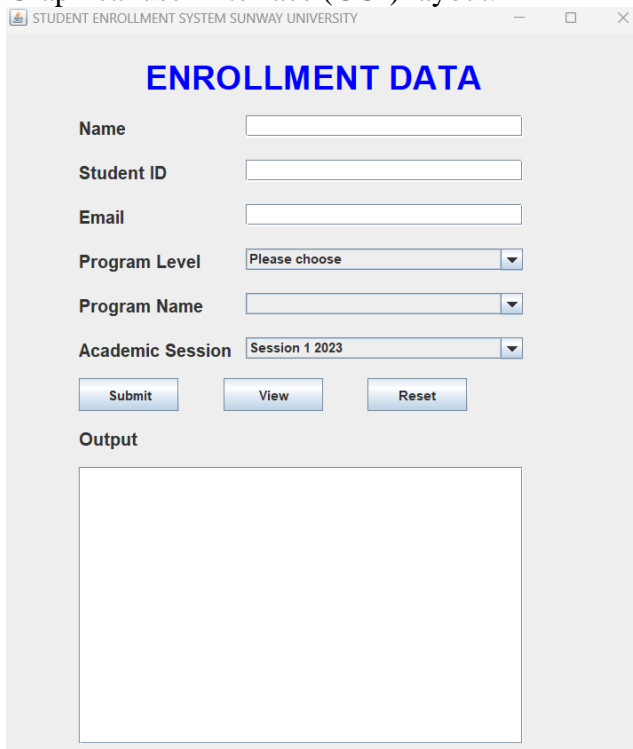
**INSTRUCTION:**

Paste your coding and GUI results here

**Question 1**

A vendor company has appointed you to develop an enrollment system for Sunway University. They ask you to develop an interface that collects student enrollment data using Java Swing components and the data must be stored in a MySQL database. Your task is to:

**a. Graphical user interface (GUI) layout:**



- b. GUI to perform the **exception handling** in message box to notify the user for:
- Name must insert in Alphabetic only.

```
txtname.addKeyListener(new KeyAdapter() {
    public void keyTyped(KeyEvent e) {
        char c = e.getKeyChar();
        if(!Character.isSpaceChar(ch:c)&&!Character.isAlphabetic( codePoint:c) ){
            e.consume();
        }
    }
});
```

- Email must contain @

```
txtmail.addKeyListener(new KeyAdapter() {
    public void keyTyped(KeyEvent e) {
        char c = e.getKeyChar();
        if(Character.isWhitespace(ch:c)){
            e.consume();
        }
    }
});
```

- c. GUI for **ItemListener** is used for the Program Level combo box.
- If the selected item in Program Level is "**Degree**".

```
programlevel.addItemListener(e->{
    int selectedprogram =programlevel.getSelectedIndex();
    if(selectedprogram == 2){
        programname.removeAllItems();
        for(String item : diploma){
            programname.addItem(item);
        }
    }
    }else if(selectedprogram == 1){
        programname.removeAllItems();
        for(String item2 : degree){
            programname.addItem( item: item2);
        }
    }
    }else if(selectedprogram == 0){
        programname.removeAllItems();
        for(String item3 : choose){
            programname.addItem( item: item3);
        }
    }
});
```

**Program Level** Degree

**Program Name** Degree in Manufacturing Technology

b. If the selected item in Program Level is "**Diploma**".

**Program Level** Diploma

**Program Name** Diploma in Business Administration

d. GUI for Database (In PHPMyadmin / Netbeans Project) – **STRUCTURE**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1	name	varchar(100)	utf8mb4_general_ci		Yes	NULL		Change  Drop  More
<input type="checkbox"/>	2	student_id	varchar(20)	utf8mb4_general_ci		No	None		Change  Drop  More
<input type="checkbox"/>	3	email	varchar(100)	utf8mb4_general_ci		Yes	NULL		Change  Drop  More
<input type="checkbox"/>	4	program_level	varchar(20)	utf8mb4_general_ci		Yes	NULL		Change  Drop  More
<input type="checkbox"/>	5	program_name	varchar(50)	utf8mb4_general_ci		Yes	NULL		Change  Drop  More
<input type="checkbox"/>	6	session	varchar(20)	utf8mb4_general_ci		Yes	NULL		Change  Drop  More

e. When user click on the “**Submit**” button, all the entered information should be stored in database. Perform:

a. **exception handling** to handle successful or unsuccessful data inserted into the database.

```

JOptionPane.showMessageDialog(e, {
    String name = name.getText();
    String studentid = studentid.getText();
    String studentemail = studentemail.getText();
    String studentprogramlevel = (String) programlevel.getSelectedItem();
    String studentprogram = (String) programname.getSelectedItem();
    String studentacademicession = (String) academicession.getSelectedItem();

    try{
        Class.forName("com.mysql.jdbc.Driver");
        Connection con = DriverManager.getConnection(url, user, password);
        Statement stmt = con.createStatement();

        String sqluse = "USE enrollment";
        stmt.executeUpdate(sqluse);

        String sqlinsert = String.format("INSERT INTO enrollment_data (name,student_id,email,program_level,program_name,session) VALUES ('%s','%s','%s','%s','%s','%s')", name, studentid, studentemail, studentprogramlevel, studentprogram, studentacademicession);
        stmt.executeUpdate(sqlinsert);
        JOptionPane.showMessageDialog(null, message, "Data has been saved successfully", JOptionPane.INFORMATION_MESSAGE);
    }catch(Exception w){
        JOptionPane.showMessageDialog(null, "ERROR" + w.getMessage(), "Message", JOptionPane.WARNING_MESSAGE);
    }
});

```

b. **exception handling** if the user enters the same student id.


STUDENT ENROLLMENT SYSTEM SUNWAY UNIVERSITY

## ENROLLMENT DATA

**Name**   
**Student ID**   
**Email**   
**Program Level**   
**Program Name**   
**Academic Session**

**Output**

Message

 EERORDuplicate entry '10DDT21F1022' for key 'PRIMARY'

f. Your database **RESULTS**.

	name	student_id	email	program_level	program_name	session
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	Gurmit Singh	10DDT21F1022	gurmit@gmail.com	Diploma	Diploma in Information Technology	Session 2 2023

g. When user click on “**View**” button, the information will display in output TextArea from database.

**Output**

NAME:Gurmit Singh  
STUDENT ID:10DDT21F1022  
EMAIL:gurmit@gmail.com  
PROGRAM LEVEL:Diploma  
PROGRAM NAME:Diploma in Information Technology  
SESSION:Session 2 2023

- h. When user clicks on the “**Reset**” button, it should clear the fields and allow user to enter new information.

STUDENT ENROLLMENT SYSTEM SUNWAY UNIVERSITY

## ENROLLMENT DATA

Name

Student ID

Email

Program Level

Program Name

Academic Session

Output

**FULL CODING (PRINT SCREEN CODING HERE)**

INFORMATION AND COMMUNICATION TECHNOLOGY DEPARTMENT									
PRACTICAL TEST RUBRIC  (CL01, P4)									
COURSE CODE	DFP50273	COURSE NAME	INTEGRATIVE PROGRAMMING AND TECHNOLOGIES						
LECTURER'S NAME	SIR HILMI								
STUDENT'S NAME	GURMIT SINGH				REGISTRATION NUMBER				
CRITERIA	4	3	2	1	0	WEIGHT	CALCULATION	STUDENT'S SCORE (MAX : 4)	STUDENT'S MARK 60
PROGRAM HANDLING	File is able to open and data can be written and read from file.	File is able to open and few data is missing while writing and reading from file.	File is able to open and some data is missing while writing and reading from file.	File is not able to open but it can show error message.	File is not able to open.	1	___ x 1/60		0.00
INTERFACE DESIGN LAYOUT	Excellently use all the components and organize them in appropriate manner	Use over than 50% of the components and organize them in appropriate manner	Use less than 50% of the components but organize them in inappropriate arrangement	Use inappropriate components, and inappropriate arrangement	Use inappropriate Layout and Components	1	___ x 1/60		0.00
INTERFACE DESIGN CODE	Successfully use the correct components and correctly code the design	Use the correct components and correctly code the design	Use the correct components but inappropriate design code.	Use the incorrect components and too many error in design code	Incorrect coding for Layout and Components	2	___ x 2/60		0.00

<b>CREATE DATABASE</b>	Successfully create database, table and attributes with suitable name and data type.	Create database, table and attributes with suitable name and data type.	Create database, table and attributes with unsuitable name and data type.	Create database, table and attributes with unsuitable name and data type. Missing more than one attributes.	Not create any database	1	___ x 1/60		0.00
<b>ITEM LISTENER</b>	Successfully implement ItemListener interface for ComboBox	Implements ItemListener interface for ComboBox with minor error	Implements ItemListener interface for ComboBox with major error	Implements ItemListener interface for ComboBox with major error	Not implement ItemListener interface	1	___ x 1/60		0.00
<b>COMBO BOX CONDITION</b>	Successfully create coding for if-else condition for comboboxs	Implements create coding for if-else condition for comboboxs with minor error	Implements create coding for if-else condition for comboboxs with major error	Implements create coding for if-else condition for comboboxs with major error	Not implement any code	1	___ x 1/60		0.00
<b>EXCEPTION HANDLING</b>	Successfully create Exception handling for 4 Condition	Create Exception handling for 3 Condition	Create Exception handling for 2 Condition	Create Exception handling for 1 Condition	Not create any Exception handling	1	___ x 1/60		0.00
<b>ACTION LISTENER (SUBMIT, CLEAR, VIEW)</b>	Successfully implement ActionListener interface for All Buttons	Implement ActionListener interface for Buttons with minor error	Implement ActionListener interface for Buttons with major error	Implement ActionListener interface for Buttons with major error	Not implement ActionListener interface	1	___ x 1/60		0.00
<b>DATABASE CONNECTION</b>	Successfully make a connection to database	Able to make a connection to database with minor error	Able to make a connection to database with major error	Cannot make a connection but have simple coding	No Coding for database connection	1	___ x 1/60		0.00

<b>INSERT DATA INTO DATABASE</b>	Successfully insert all the data into database (Accept term and condition should collect 1)	Insert more than 50% of the data into the database	insert less than 50% of the data into the database	Program cannot insert any data into database but have simple coding	No coding to insert Data	2	___ x 2/60		0.00
<b>VIEW ALL DATA</b>	Program successfully display all the data from the database	Program displays more than 50% of the output as required with no errors.	Program display less than 50% of the output as required with some errors	Simple coding for view data but cannot view in TextArea	No Coding to view all data	2	___ x 2/60		0.00
<b>PROGRAM STANDARDS</b>	Program is stylistically well designed complete with all required comments	Few inappropriate design choices (i.e. relevant variable names, proper indentation but missing a few required comments)	Several inappropriate design choices (i.e. relevant variable names but improper indentation and missing a few required comments)	Program is inappropriate design choices (i.e. still relevant variable names, improper indentation and no comments at all)	Program is poorly written with no indentation and no comments at all.	1	___ x 1/60		0.00
					<b>TOTAL MARKS</b>				<b>0.00</b>
<b>* Marks will deduct if students duplicates the code program from others.</b>									