שאלה 1  
  
א. הפונקציה fun מבצעת הדפסה של ה- name כמספר הפעמים שמייצג המשתנה – num

לדוגמא: name=ofir

Num = 2

הפלט יהיה : \*ofir \*\*ofir\*

ב. פלט התוכנית : \*Ex1\*\*Ex1\*\*Ex1\*

False

Falses

Good bye

שאלה 2

פלט התוכנית : num1=10

\*\*\*\*\*

Num1=20

Num2=30

\*\*\*\*\*

Num1=40

Num2=50

\*\*\*\*\*

Num1=40

Num2=50

\*\*\*\*\*

Num1=40

Num2=50

שאלה 3

1. פלט התוכנית : 80.0 70.0 60.0
2. addMoreMarks אמורה להוסיף ציונים למערך אבל מכיוון שבתוך הפונקציה יוצרים משתנה חדש מסוג Marks זה אומר שישנם כרגע שתי משתנים בעלי אותו השם (marks1) אבל רק ה – marks1 שנמצא בסקופ של ה – main מוצג.
3. פתרון ראשון : ישנה אפשרות לשנות את הפונקציה addMoreMarks כך שתקבל את האובייקט (marks1) ובתוך הפונקציה להוסיף ערכים.  
     
   פתרון שני : להעביר את הפונקציה addMoreMarks לתוך מחלקת Marks .
4. פתרון שני : בתוך ה – main :

marks1. addMoreMarks();  
  
בתוך הקלאס – Marks:

public void addMoreMarks()

{

addMark(90);

addMark(100);

}

שאלה 4

מחלקת action.Listener :

**package** action.listener;

**import** java.awt.event.ActionEvent;

**import** java.awt.event.ActionListener;

**public** **class** ExitActionListener **implements** ActionListener

{

@Override

**public** **void** actionPerformed(ActionEvent e)

{

System.exit(0);

}

}

מחלקת main :

**package** main;

**import** java.awt.BorderLayout;

**import** java.awt.Color;

**import** java.awt.Dimension;

**import** java.awt.FlowLayout;

**import** java.awt.GridLayout;

**import** java.awt.event.ActionEvent;

**import** java.awt.event.ActionListener;

**import** javax.swing.JButton;

**import** javax.swing.JFrame;

**import** javax.swing.JLabel;

**import** javax.swing.JPanel;

**import** javax.swing.JTextField;

**import** action.listener.ExitActionListener;

**public** **class** MainApp {

**public** **static** **void** main(String[] args)

{

JFrame win=**new** JFrame("Targil 4");

win.setSize(1000,70);

JPanel p=**new** JPanel(**new** GridLayout(1,3));

win.add(p,BorderLayout.NORTH);

JButton b=**new** JButton("Button");

p.add(b);

JTextField t=**new** JTextField("Button2",15);

p.add(t);

JLabel l=**new** JLabel("Button3");

p.add(l);

b.addActionListener(**new** ActionListener()

{

**public** **void** actionPerformed(ActionEvent e) {

l.setText(l.getText()+t.getText());

}

});

win.setVisible(**true**);

}

}

שאלה 5

מחלקת SqlDbConnection :

**package** classes;

**import** java.sql.CallableStatement;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.ResultSet;

**import** java.sql.ResultSetMetaData;

**import** java.sql.SQLException;

**import** java.sql.Statement;

**public** class SqlDbConnection

{

Connection conn = **null;**

**public** SqlDbConnection(String driver, String url, String user, String pass) **throws** SQLException

{

**try** {

// Load the Access Driver

Class.*forName*(driver);

// Connect to the DB according to driver and user and password

conn = DriverManager.*getConnection*(url, user, pass);

} **catch** (ClassNotFoundException e) {

System.***out***.println(e.getMessage());

System.***out***.println("Please download driver...");

System.*exit*(1);

} **catch** (SQLException e) {

System.***out***.println(e.getMessage());

System.*exit*(1);

} **finally** {

System.***out***.println("Connection has been established");

}

}

**public** ResultSet simpleSelectQuery(String query) **throws** SQLException

{

ResultSet rs = **null**;

**try** {

Statement stat = conn.createStatement();

rs = stat.executeQuery(query);

} **catch** (SQLException e) {

System.***out***.println(e.getMessage());

}

**return** rs; // Table

}

**public** **int** simpleInsertUpdateDeleteQuery(String cmd) **throws** SQLException

{

**int** res = 0;

**try** {

//create simple statement

Statement stat = conn.createStatement();

//execute query and get ResultSet with the data

res = stat.executeUpdate(cmd);

//stat.executeUpdate("INSERT INTO AvrahamiTbl(ID,NAME,SALARY) VALUES('4','Temp','4000')");

}

**catch**(SQLException e) {

System.***out***.println(e.getMessage());

}

**return** res;

}

**public** ResultSet storedProcExec(String proc) **throws** SQLException

{

ResultSet rs = **null**;

**try** {

CallableStatement stat = conn.prepareCall(proc);

rs = stat.executeQuery();

} **catch** (SQLException e) {

System.***out***.println(e.getMessage());

}

**return** rs;

}

@Deprecated

**public** **void** ~~printRSBad~~(ResultSet rs) **throws** SQLException

{

**while**(rs.next()) {

System.***out***.println("ID= " + rs.getString("ID") +

" Name= "+ rs.getString("NAME") +

" Salary= "+ rs.getInt("SALARY") +

" Age= " +rs.getInt("AGE"));

}

}

**public** **void** printRS(ResultSet rs) **throws** SQLException

{

ResultSetMetaData rsmd = rs.getMetaData();

**int** numOfCols = rsmd.getColumnCount();

String colName;//tblName;

**while**(rs.next()) {

**for**(**int** i = 1; i <= numOfCols ; i++) {

colName = rsmd.getColumnName(i);

//tblName = rsmd.getTableName(i);

System.***out***.println(colName + ": " +rs.getString(colName));

}

System.***out***.println("--------------------");

}

}

**public** **void** closeDB() **throws** SQLException

{

**if** (conn != **null**)

{

//close connection to DB

conn.close();

System.***out***.println("Connection to DB closed.");

}

}

} 🡸 calss close !

מחלקת main :

**package** main;

**import** java.sql.ResultSet;

**import** java.sql.SQLException;

**import** classes.SqlDbConnection;

**public** **class** MainApp

{

//public static final String DRIVER\_STRING = "net.ucanaccess.jdbc.UcanaccessDriver";

//public static final String URL\_STRING = "jdbc:ucanaccess://AccessDB1.accdb";

**public** **static** **final** String ***DRIVER\_STRING*** = "com.microsoft.sqlserver.jdbc.SQLServerDriver";

**public** **static** **final** String ***URL\_STRING*** = "jdbc:sqlserver://DESKTOP-54R30KB\\SQLEXPRESS;databaseName=Java\_Projects\_DB;integratedSecurity=true";

**public** **static** **void** main(String[] args) **throws** SQLException

{

SqlDbConnection con1 = **null**;

**try**

{

ResultSet rs = **null**;

con1 = **new** SqlDbConnection(***DRIVER\_STRING***,***URL\_STRING***, "DESKTOP-54R30KB\\ofirl", "");//Works

System.***out***.println("BEFORE:");

rs = con1.simpleSelectQuery("SELECT \* FROM USERS");//Simple query 9 and print the result

con1.printRS(rs);

//Insert data --> worked

con1.simpleInsertUpdateDeleteQuery("INSERT INTO Users(NAME,AGE,SALARY) VALUES('Noam','29','50200')");

//Update data --> worked

con1.simpleInsertUpdateDeleteQuery("UPDATE Users SET NAME = 'Stav' WHERE ID = 12345");

//Delete User --> worked

con1.simpleInsertUpdateDeleteQuery("DELETE FROM Users WHERE ID = 12347");

System.***out***.println("AFTER:");

rs = con1.simpleSelectQuery("SELECT \* FROM USERS");//Simple query 9 and print the result

con1.printRS(rs);

//PROCEDURES

//EXEC USER\_BY\_ID @ID = 4

//EXEC USER\_MAX\_SALARY

System.***out***.println("Stored Procedure USER\_BY\_ID:");

//rs = con1.simpleSelectQuery("EXEC USER\_BY\_ID @ID = 12345");

rs = con1.storedProcExec("{call USER\_BY\_ID(12345)}");

con1.printRS(rs);

//worked --> second proc to check

System.***out***.println("highest salary is:");

//rs = con1.simpleSelectQuery("EXEC USER\_MAX\_SALARY");

rs = con1.storedProcExec("{call USER\_MAX\_SALARY}");

con1.printRS(rs);

} **finally**

{

con1.closeDB();

}

}

} 🡸 calss close !