Assignment 12:

Creation Of Database:

//STEP 1. Import required packages

import java.sql.\*;

public class JDBCExample {

// JDBC driver name and database URL

static final String JDBC\_DRIVER = "com.mysql.jdbc.Driver";

static final String DB\_URL = "jdbc:mysql://localhost/";

// Database credentials

static final String USER = "username";

static final String PASS = "password";

public static void main(String[] args) {

Connection conn = null;

Statement stmt = null;

try{

//STEP 2: Register JDBC driver

Class.forName("com.mysql.jdbc.Driver");

//STEP 3: Open a connection

System.out.println("Connecting to database...");

conn = DriverManager.getConnection(DB\_URL, USER, PASS);

//STEP 4: Execute a query

System.out.println("Creating database...");

stmt = conn.createStatement();

String sql = "CREATE DATABASE STUDENTS";

stmt.executeUpdate(sql);

System.out.println("Database created successfully...");

}catch(SQLException se){

//Handle errors for JDBC

se.printStackTrace();

}catch(Exception e){

//Handle errors for Class.forName

e.printStackTrace();

}finally{

//finally block used to close resources

try{

if(stmt!=null)

stmt.close();

}catch(SQLException se2){

}// nothing we can do

try{

if(conn!=null)

conn.close();

}catch(SQLException se){

se.printStackTrace();

}//end finally try

}//end try

System.out.println("Goodbye!");

}//end main

}//end JDBCExample

Output:

C:\>java JDBCExample

Connecting to database...

Creating database...

Database created successfully...

Goodbye!

C:\>

Creation Of Table:

//STEP 1. Import required packages

import java.sql.\*;

public class JDBCExample {

// JDBC driver name and database URL

static final String JDBC\_DRIVER = "com.mysql.jdbc.Driver";

static final String DB\_URL = "jdbc:mysql://localhost/STUDENTS";

// Database credentials

static final String USER = "username";

static final String PASS = "password";

public static void main(String[] args) {

Connection conn = null;

Statement stmt = null;

try{

//STEP 2: Register JDBC driver

Class.forName("com.mysql.jdbc.Driver");

//STEP 3: Open a connection

System.out.println("Connecting to a selected database...");

conn = DriverManager.getConnection(DB\_URL, USER, PASS);

System.out.println("Connected database successfully...");

//STEP 4: Execute a query

System.out.println("Creating table in given database...");

stmt = conn.createStatement();

String sql = "CREATE TABLE REGISTRATION " +

"(id INTEGER not NULL, " +

" first VARCHAR(255), " +

" last VARCHAR(255), " +

" age INTEGER, " +

" PRIMARY KEY ( id ))";

stmt.executeUpdate(sql);

System.out.println("Created table in given database...");

}catch(SQLException se){

//Handle errors for JDBC

se.printStackTrace();

}catch(Exception e){

//Handle errors for Class.forName

e.printStackTrace();

}finally{

//finally block used to close resources

try{

if(stmt!=null)

conn.close();

}catch(SQLException se){

}// do nothing

try{

if(conn!=null)

conn.close();

}catch(SQLException se){

se.printStackTrace();

}//end finally try

}//end try

System.out.println("Goodbye!");

}//end main

}//end JDBCExample

Output:

C:\>java JDBCExample

Connecting to a selected database...

Connected database successfully...

Creating table in given database...

Created table in given database...

Goodbye!

C:\>

Insertion Of Values:

//STEP 1. Import required packages

import java.sql.\*;

public class JDBCExample {

// JDBC driver name and database URL

static final String JDBC\_DRIVER = "com.mysql.jdbc.Driver";

static final String DB\_URL = "jdbc:mysql://localhost/STUDENTS";

// Database credentials

static final String USER = "username";

static final String PASS = "password";

public static void main(String[] args) {

Connection conn = null;

Statement stmt = null;

try{

//STEP 2: Register JDBC driver

Class.forName("com.mysql.jdbc.Driver");

//STEP 3: Open a connection

System.out.println("Connecting to a selected database...");

conn = DriverManager.getConnection(DB\_URL, USER, PASS);

System.out.println("Connected database successfully...");

//STEP 4: Execute a query

System.out.println("Inserting records into the table...");

stmt = conn.createStatement();

String sql = "INSERT INTO Registration " +

"VALUES (100, 'Zara', 'Ali', 18)";

stmt.executeUpdate(sql);

sql = "INSERT INTO Registration " +

"VALUES (101, 'Mahnaz', 'Fatma', 25)";

stmt.executeUpdate(sql);

sql = "INSERT INTO Registration " +

"VALUES (102, 'Zaid', 'Khan', 30)";

stmt.executeUpdate(sql);

sql = "INSERT INTO Registration " +

"VALUES(103, 'Sumit', 'Mittal', 28)";

stmt.executeUpdate(sql);

System.out.println("Inserted records into the table...");

}catch(SQLException se){

//Handle errors for JDBC

se.printStackTrace();

}catch(Exception e){

//Handle errors for Class.forName

e.printStackTrace();

}finally{

//finally block used to close resources

try{

if(stmt!=null)

conn.close();

}catch(SQLException se){

}// do nothing

try{

if(conn!=null)

conn.close();

}catch(SQLException se){

se.printStackTrace();

}//end finally try

}//end try

System.out.println("Goodbye!");

}//end main

}//end JDBCExample

Output:

C:\>java JDBCExample

Connecting to a selected database...

Connected database successfully...

Inserting records into the table...

Inserted records into the table...

Goodbye!

Selection Of Values:

//STEP 1. Import required packages

import java.sql.\*;

public class JDBCExample {

// JDBC driver name and database URL

static final String JDBC\_DRIVER = "com.mysql.jdbc.Driver";

static final String DB\_URL = "jdbc:mysql://localhost/STUDENTS";

// Database credentials

static final String USER = "username";

static final String PASS = "password";

public static void main(String[] args) {

Connection conn = null;

Statement stmt = null;

try{

//STEP 2: Register JDBC driver

Class.forName("com.mysql.jdbc.Driver");

//STEP 3: Open a connection

System.out.println("Connecting to a selected database...");

conn = DriverManager.getConnection(DB\_URL, USER, PASS);

System.out.println("Connected database successfully...");

//STEP 4: Execute a query

System.out.println("Creating statement...");

stmt = conn.createStatement();

String sql = "SELECT id, first, last, age FROM Registration";

ResultSet rs = stmt.executeQuery(sql);

//STEP 5: Extract data from result set

while(rs.next()){

//Retrieve by column name

int id = rs.getInt("id");

int age = rs.getInt("age");

String first = rs.getString("first");

String last = rs.getString("last");

//Display values

System.out.print("ID: " + id);

System.out.print(", Age: " + age);

System.out.print(", First: " + first);

System.out.println(", Last: " + last);

}

rs.close();

}catch(SQLException se){

//Handle errors for JDBC

se.printStackTrace();

}catch(Exception e){

//Handle errors for Class.forName

e.printStackTrace();

}finally{

//finally block used to close resources

try{

if(stmt!=null)

conn.close();

}catch(SQLException se){

}// do nothing

try{

if(conn!=null)

conn.close();

}catch(SQLException se){

se.printStackTrace();

}//end finally try

}//end try

System.out.println("Goodbye!");

}//end main

}//end JDBCExample

Output:

C:\>java JDBCExample

Connecting to a selected database...

Connected database successfully...

Creating statement...

ID: 100, Age: 18, First: Zara, Last: Ali

ID: 101, Age: 25, First: Mahnaz, Last: Fatma

ID: 102, Age: 30, First: Zaid, Last: Khan

ID: 103, Age: 28, First: Sumit, Last: Mittal

Goodbye!

C:\>