Object Oriented Programming in Java Lab Sheet
II Year /I Part
Faculty: BCA

Lab sheet 9

Objectives:

1. Execution of sample JDBC program.
2. To familiarize with JDBC statements.

Objective 1:

```
package com.texas.npl;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;

public class Select {

	public static void main(String[] args) {

		try {
			Class.forName("com.mysql.cj.jdbc.Driver");

Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/empmgmt", "UserName", "Password");

			Statement statement = con.createStatement();
			String sql = "SELECT * FROM city;";

			ResultSet rs = statement.executeQuery(sql);
			while (rs.next()) {
				String id = rs.getString("ID");
				String name = rs.getString("Name");
				String countryCode = rs.getString("CountryCode");
				String district = rs.getString("District");
				String population = rs.getString("Population");

				System.out.println(id + " : " + name + " : " + countryCode + " : " + district
+ " : " + population);
			}

		} catch (Exception e) {
			e.printStackTrace();
		}

	}
}
```

Assignment:

1.0. Create a database name as **empmgmt** with table name as **city** having below properties:

```
ID int NOT NULL AUTO_INCREMENT PRIMARY KEY,
Name varchar(255) NOT NULL,
CountryCode char(3) NOT NULL,
District char(20) NOT NULL,
Population int NOT NULL);
```

1.1. Modify above program and select top 10 elements sorted by ID in ascending order.

Objective 2:

```
package com.texas.npl;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;

public class Insert {

	public static void main(String[] args) {

		try {
			Class.forName("com.mysql.cj.jdbc.Driver");

	Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/empmgmt", "UserName", "Password");

	String sql_qyery = "Insert into city (Name,CountryCode,District,Population) values (?,?,?,?);";

				PreparedStatement statement = con.prepareStatement(sql_qyery);
				statement.setString(1, "Kathmandu");
				statement.setString(2,"NPL");
				statement.setString(3,"Kathamnadu");
				statement.setString(4,"100000");

				int result = statement.executeUpdate();
				if (result > 0) {
					System.out.println("Data Inserted Successfully!");
				}
			} catch (Exception e) {
				e.printStackTrace();
			}

	}
}
```

Assignment:

2.0. Using the above database and table, modify above program and update the record where ID=1 set Name = "Bhaktapur" and Population = 20,000 use prepared Statement.

2.1. Using the above database and table, write a java program and select all the records from the city table using the following statements :

a. prepared Statement
b. create statement.

2.2. Write a java program and delete the record where ID=2 use prepared statement.