# Department of Computing

**CS213: Advanced Programming**

**Class: BSCS – 6C**

# Lab 6: Database Connectivity

**Date: October 26, 2018**

# Time: Friday 2:00 PM – 5:00 PM

# Instructor: Dr. Abdul Ghafoor

# 

# Lab 5: Development of Database Application

## Introduction

In this lab, students have to design, develop, and test a database application to store person’s information, update person’s record and fetch Person information against a person id. The client application will also provide feature to delete person against an id.

## Objectives

* Develop a Database application
* Handling of various SQL queries.
* Exception Handling

## Tools/Software Requirement

* Solutions should be implemented using Java.
* **Do not use any external library for reading files and creating client server.**

**Description**

Each student must, individually build the complete application on their own. Students must upload their solutions on LMS to qualify for evaluation.

* Any exceptions or errors leading to non-execution of submitted code.
* Failure to upload the solution on LMS.
* Failure to submit original code.
* Failure to explain the submission, during viva.

**Lab Task**

Develop a java based application to store person’s information in persistent storage. In this you have to create a database name identity and then create a table Person which has following attributes:

*int id;*

*varchar name;*

*varchar fatherName;*

*varchar organization;*

*varchar mobile;*

Your application will get configuration parameters like url, password and username. After that it will create a connection with database. After that you need to implement save, update, delete and get functions to store, update, delete and retrieve person’s information from database table. Regarding design of application, I would recommend that you should create following classes:

**Person:** Used to keep information about a person

**Connector:** accepts database configurations and then creates connection with database

**DBHandler:** used to implement various database functions like save, delete, update and get. Each function will throw SQLException

**DBMain:** A main class which will call various functions to complete lab work. This will be used to get input and display output.

**Note**: In order to create connection with database, you need to download mysql connector and then place “*mysql-connector-java-8.0.11.jar*” file on the build path.

Download Link:

*http://central.maven.org/maven2/mysql/mysql-connector-java/8.0.11/mysql-connector-java-8.0.11.jar*

## Deliverables

* Each submission is individual with the following composition:
  + Source Code
  + README.txt (Introduction, Approach, How to Run)
* Convert your submission files into a zip folder and name it as given below, finally upload the zip folder to LMS.
  + Name – Registration No. – Section

## Grade Criteria

This lab is graded. Min marks: 0. Max marks: 10.

|  |  |  |
| --- | --- | --- |
| **Activity** | **Minimum** | **Maximum** |
| Documentation with clearly defined understanding of the lab task and approach | 0 | 2 |
| Code clarity with clean, formatted and commented code. | 0 | 3 |
| Functionality | 0 | 3 |
| Viva | 0 | 2 |
| **Total** | **0** | **10** |