# Department of Computing

**CS 213: Advanced Programming**

**Class: BSCS 5 AB**

# Lab 7: Persistent e-Café 2

**Date: November 9th, 2017**

**Time: Thursday (10:00-12:50 & 14:00 – 16:50)**

# Instructor: Fahad Ahmed Satti

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# Lab 7: Persistent e-Café 2

## Introduction

In this lab the students have to update their own implementation of the e-cafe from lab 6, and convert appropriate queries to PreparedStatement and CallableStatement form. JDBC drivers should be included via Maven only.

## Objectives

After performing this lab students will be able to understand:

* PreparedStatment
* CallableStatement
* Maven

## Tools/Software Requirement

* Solutions should be made using Java and JDBC, only.
* You can take help from internet but remember **no plagiarism.**

**Description**

Update your DAO from Lab 6 to convert appropriate queries to PreparedStatement form. E.g. the query to add menu item, can benefit from PreparedStatement usage. You must convert atleast 1 update (insert or delete) and 2 Select statements to use PreparedStatement, instead of JDBC statement. This conversion must be justified in the description document.

Create a database procedure and use CallableStatements to execute it. E.g. you can create a procedure which picks all the order, which have been placed but not yet delivered or taken away by the user.

Load the JDBC driver Jar via Maven.

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

**Lab Task**

* Convert atleast 1 update (insert or delete) query to use PreparedStatements
* Convert atleast 2 select queries to use PreparedStatements
* Create a database procedure (with in, out and inout parameters) and use CallableStatements to execute it.
* Load the JDBC driver Jar via Maven.
* If you haven’t done lab 6, now is a good time to start.
* Ensure your implementation is correct by checking the requirements from the previous Unit Tests.

## Deliverables

* Each submission is individual with the following composition:
  + Source Code
  + Unit Tests
  + Documentation(Introduction, Approach, Design, How to Run and Analysis)
  + Link to the public repo on GitHub
* 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 will be graded on the following rubric:

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| --- | --- |
| Activity | Maximum Marks |
| 1 PreparedStatement with Update type query (with Justification) | 6 |
| 2 PreparedStatement with Select type query (with Justification) | 4 |
| Create a correct database procedure with in, out and inout parameters  (with Justification) | 2 |
| Using CallableStatements to execute the stored procedure  (with Justification) | 6 |
| Documentation | 2 |
| Code Management | 4 |