

MySQL Summer Project Report

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1. Brief Project Introduction

The objective of the MySQL project is to connect Java with a MySQL database and to write a Java program to output the information in the MySQL database and analyze them. The information stored in the MySQL database, regarding this project, concerns the participants who are interns of Dr. Xiaolin Hu, who's also my instructor for this project; the analyzation regarding the information will be written as part of the Java program, which will be outputted on the console of the Java IDE.

2. Project Procedure Overview

In order to connect Java with a MySQL database, I had first to download a MySQL Workbench and a connector file; after the installation of MySQL workbench was completed, I had to connect Eclipse, an IDE, with the MySQL workbench by dragging the executable connector file to a folder of an existing Java project; another purpose of the connector file is enabling my Java IDE to import the MySQL libraries needed in order for me to complete the program. After the connection was completed, I finished the project by coding on the Java IDE.

3. Project Procedure Summary

3.1 Steps to connect Java IDE to the MySQL workbench

1. After downloading the MySQL workbench, I created an MySQL connection on the MySQL Workbench. The MySQL connection is simply a database containing information from user input.
2. To connect my Java IDE with the MySQL workbench, I first created a new folder called "external_lib" under an existing Java project.
3. I had to drag the Java connector file downloaded to the folder and add the connector file to the classpath of my Java project.

3.2 Code Description

Before I started writing my program, I had to create four varchar variable columns in my MySQL connection; each column either stored participants' names, username, time started, or time finished. I started the program by first importing the MySQL libraries needed; a Connection

object was created, which will connect the Java project to a MySQL connection that's already created in the MySQL Workbench. Then, a string variable with the participants' information and a statement were created to insert the information into the MySQL database. After creating the statement, a ResultSet object was created for accessing the information stored in the MySQL database. To output the information inserted in the MySQL database, a while loop was utilized.

The analyzation part of the program was to calculate the number of participants, and the summation and the average from the time that all the participants took to complete their internship task during one particular day. Additional integer and double variables were initialized in order to store the time information; more code was added to the while loop for output in order to make the time addition. I also wrote two "time correction" methods to make the program to sum and to average the time correctly.

The final portion of the analyzation was to calculate the number of participants working during each time periods that are given by the user, which requires user input. The user can input the number of time periods and the length of each time periods wanted. In order to complete the final analyzation, two array variables are created to store the count of participants working during each time periods, and the time periods themselves. Then, a for loop is utilized in order to compare the time that the participants are working on to the time periods given by the user.