**Database Design SOFT7022 Project**

**Due Date: Week 11 Your Lab Session**

Develop a basic application in a general purpose procedural language (Java) that uses a DBMS (MySQL) to store data.

You must investigate, organise and implement all technical aspects of the Application Design (called a tiered architecture e.g. client-server is minimum 2 tiers), Database Design involving ER Modelling and Normalization and building a Java interface to the Database Application.

**You are to build an application system for an application area of your own choice e.g. A Bank, A Shop, A Sports Fixtures System, A Timetabling System, A Flight Booking Systems, etc. It is up you the student to determine how this system will operate and to design a database that will support its operation.**

**Please NOTE: Your topic must be original and cannot be based on any similar assignment that you may receive in other modules.**

The project will run over a number of weeks, thus some marks will be assigned to project management. As manager/supervisor, I require the following:

* Well managed time allocation to solve the problem i.e. you should devise and communicate a plan of action with progress updates so that at each stage I can be confident that the project will be completed on time i.e. not crammed at the end. Note, you could opt for weekly plan, with reviews in lab; you need to devise an alternative if you opt not for this approach.
* List of references where you sourced code/explanations of concepts.
* Reporting of problems, and potential problems, in a timely manner.
* Verifiable work by you. If you turn up at labs each week and have your work reviewed then that is one way to do this; however, if you wish to work ‘outside’ of class/lab times, then you need some other approach.

Minimum requirement is therefore, a plan (with stages/milestones) and an activity log. Each log entry must be dated. Each milestone must be reviewed.

**Final hand-up/deliverable**

1. Hard Copy Print off of all the documentation: well organised (e.g. index, page numbers, etc.) required.
   1. Your first name, Surname, Student Number, Class (e.g. ITM2, SD, SDH2)
   2. project description,
   3. technical issues dealt with,
   4. database design
   5. application design
   6. plan/log: neatness etc required,
   7. conclusions/review
   8. references
2. A Hard Copy print off of the final code (maybe add as an appendix to the project Documentation)
   1. Code to include data I/O to DBMS: SQL insert, update, select.
3. Sign off of own work (see sample below)
4. You will also be required to submit a zipped copy of codebase (NetBeans, Eclipse, etc.) with instructions on Blackboard.
5. A demo of the working code in week 11 within your lab slot. We

**Marking**:

The project is not just the programming application implementation. It is the project management and technical issues surrounding an application that uses a general purpose procedural programming language in a system configuration that uses a DBMS to store the data (referred to as a ‘backend’ database).

In overall module terms, this project is worth 30%.

This will be broken down as follows:

50% implementation as follows:

* 30% Database Aspect
* 20% Front end (Java)

30% for Documentation

20% project management & technical understanding of issues.

**Guidelines:**

Build your log as a stack in a single journal/Google Doc.

Add new entries at the top. NB Date every entry

e.g.

Nov. 4th: didn't complete import in the estimated time due to problems with another subject, got sick, managed 60% but will need to redo the plan etc..... Tech issue with my PC relating to database install, found a solution at abc.com etc

Nov. 2: plan to work 4 hours on the import function of the app this week etc.

Sample Student statement

I hereby certify that this material which I now submit for assessment, is entirely my own work and has not been taken from the work of others, save and to the extent, that such work has been cited and acknowledged within the text of my work

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Signed

Project mgmt. & scheduling help: [**https://www.mindtools.com/**](https://www.mindtools.com/)

<http://www.oracle.com/technetwork/java/javase/jdbc/index.html>

<https://dev.mysql.com/doc/connector-j/5.1/en/connector-j-overview.html>

http://www.mysqltutorial.org/mysql-jdbc-tutorial/

<http://www.mysqltutorial.org/calling-mysql-stored-procedures-from-jdbc/>