**CIS020-2**

**Systems Development & Modern database Practices**

**No. 1, (40%)**

**Assignment No. 1 – "Kiosk" Case Study**

**PART 1 & PART 2**

**Introduction to the electronic "one-stop" services shop scenario:**

**Notes of Guidance:**

Students will form a small group with whom they will work in a collaborative manner throughout the task (unit). These groups will be formally formed in/by Week-3. Changes to group membership cannot then be subsequently made without client (staff) approval. It is vital that you form a group comprising a mix of suitable skills since the task involves the building of a "student information kiosk". The system will be implemented using Oracle APEX. The task is a demanding one involving the implementation of the following overall "Kiosk" scenario. Note the following is only given as a brief introductory overview and is not to be regarded as a definitive description. Groups should be formed around a normative size of 5 persons.

"KIOSK" SCENARIO - A SHORT SUMMARY

A Student Information Kiosk (SIK) system is to be designed to allow students to access an electronic "one-stop" service shop. The SIK will aim to provide up-to-date information about all events taking place on campus (i.e. student nights, sources of support , clubs, guest lectures, workshops, as well as selected data that seeks to place the student within the context of the local community/services/discounted shopping/special offers/gym/sports activities). An important focus of the system is to enable students (both home and overseas) to gain access to sources of support, learn about Luton as a community. Thus, selected information sources of local services such as: student bank account providers, sports activities, cultural activities etc. should be included and searchable by students. Each student's personal details must be recorded. The system needs to be able to support several "levels" of user. Namely "Admin" user access will have full system privileges, thus enable all data sets to be updated. Each student will have access and be able to change only to their own personal details. Other access types such as "Guest" may also be needed, that do not require individual log-in but provide "generic" information to users, for example a "Kiosk" placed in a space within or near the University campus.

The prototype system will be developed for a desktop workstation but the visual design and usability style must be potentially portable for a range of target platforms (such as a touch screen Kiosk). So whilst your prototype is for a desktop PC you need to bear in mind the eventual target devices and usability contexts of the final solution.

Note an integral part of this task is for you to work collaboratively as a team and to gather requirements from "real" potential users of the system (i.e. students on campus), not simply build a system that matches your own set of requirements. Staff will also act as client and will meet formally with each group on a regular basis during normal practical sessions so as to provide you with additional inputs and a set of more detailed requirements. It is vital that you formally document these and keep a detailed log of all meetings with clients and users. It is important to capture the source of requirements throughout the task. Naturally the set of requirements that each group ultimately converges upon will differ slightly. This is perfectly natural as your ideas develop so will the expectations of your users and clients. Full documentation of this evolutionary process is an essential part of the task. Thus the "journey" is as important as the final production of the system itself.

An Exemplar List of Requirements (for general guidance only, not an exhaustive list)

* User log-in (different access roles are needed such as Admin, individual, "guest"
* Browse services by category
* Service availability request
* Book service/activity
* Student registration, logins and validation checks
* Booking confirmation
* Ability to cancel/update event details/bookings/an individual's personal details
* Ability to access system using suitable Web enabled mediators
* Community events need to be searchable not merely University events/information sources

**Kiosk A Guide to Your Predicted and Expected : "Work-flow"**

As a group you form a development team. An essential part of developing the system is to carry out and fully documents your activities/models/designs etc. and to refine these in the light of changing or evolving client expectations. Namely, it will be essential for you to broadly speaking engage with and fully document the following:

1. Produce a plan of work

2. Identify users, clients and service "audience"

3. Gather and refine a set of initial user requirements

4. Analyse these using a suitable methodology

5. Produce a list of functional and non-functional requirements

6. Model these using more than one modelling technique and notation

7. Produce an E-R model or set of models, fully normalise and refine your ERM

8. Produce a user interface design and DBMS/Web interface design

9. Implement and fully test the system with "real" users

10. Refine solution iteratively as necessary, providing full justification for all modifications

11. Demonstrate a "user-centric" design paradigm

12. Demonstrate the system to the "client", defend solution through Q & A

It is essential that all group members are active and reliable throughout the design and development of the system. You must orchestrate the activities of the group so as to leverage the talents of the members of the group. That is, each member of the group will have differing strengths and weaknesses. Assess these and work accordingly. It is expected that each member of the group shows that they are active in all parts of (1) - 12 above, but the relative contributions will of course differ. This is all part of the task. Inactive members of a group will be referred.

This assessment comprises a group development task. You will develop a "Student Information" Kiosk using up-to-date tools and showing evidence of analysis, design, implementation and testing to a high level of specifications, provided by your "client". The task will necessitate you using tools you already know as well as pushing the boundaries of your skills and knowledge.

You will develop the system iteratively using client input(s). The whole Software Development life-cycle needs to be fully documented in the formal of written report. The group will also present (i.e. defend) their solution to an audience comprising client and teaching team.

A professional approach is expected at all times.