**OBJECTIVE**

Develop the practical ability to describe, design and implement an iOS application

**LEARNING OUTCOMES**

1. Explain and be able to apply a variety of application development tools for iOS based mobile devices
2. Apply advanced techniques and application models in the programming of iOS based mobile devices.
3. Be able to enhance technical competencies by designing, developing & deploying mobile applications using iOS Platform

**ASSESSMENT**

An individual in course assignment weighted at 100% (LO 1, 2, 3)

**COURSEWORK DESCRIPTION**

You can choose any scenario based upon your interest in order to create a simple mobile application. The mobile application must satisfy the following requirements:

1. Application should be a potential real-world usage on a mobile device
2. Suitable user interface with the following items:

* Navigation ease
* Appropriate use of text formatting and images
* Fitness of purpose and appropriateness of material
* Consistency between all forms

1. Applied data storage
2. Business logic (certain transactions/ data manipulations) should reflect the scenario
3. Applied Model-View-Controller (MVC) design pattern
4. Applied Cocoa Touch Framework

You are required to get the approval of your mobile application title from your lecturer.

A possible scenario is given below, but this is just for guidance. You do not need to stick rigidly to this idea:

APU’s iWebSpace does not provide full features of Webspace. The app only provides important features from Webspace such as exam and class timetables, bus timetable and tracking, feedback system and etc. Students greatly rely on the application to check their results, timetable, fee schedule and news. However, they need to revert back to University Webspace to make an appointment with their lecturer through Lecturer Consultation Hours System, when they need help with any specific study-related problem or issue. To ease the appointment process, a mobile application should be available for students to view, book and cancel the lecturers' consultation slots.

You are required to prototype the use of mobile phone technology on the lecturer consultation appointment process in APU. Using your newfound knowledge of swift and iOS you are requested to build a simple Lecturer Consultation Hours application for APU’s iWebSpace.

#### REQUIREMENTS

The marks allocation of the assignment is divided into three parts. 55 marks are allocated to the application development, 30 marks for the report (documentation) to accompany the application and 15 marks for presentation.

|  |  |
| --- | --- |
| Components | Marks allocated |
| iOS application (Implementation)  * Complexity of the application   + Features and logics   + Coding quality, style and best practices * Application HCI * Efficient use of data storage facility * Validation of user input | 55 |
| Report (Documentation) The supporting document needs to reflect the design of the implemented system, which should include: -   * System description * Application wireframe * Application view hierarchy * Explanation of the techniques implemented with sample code * System screen shots with explanations * System limitations and enhancements * iOS application development tools appraisal * Conclusion * References | 30 |
| **Presentation**   * Clarity of explanations during app execution * Ability to answer the questions posed * Skills and knowledge | 15 |

**Development Tools**

* Any iOS Development tool can be used to develop the artefact. However, the mobile app must be implemented using swift programming language.
* You are recommended to use Xcode.

**PERFORMANCE CRITERIA**

A demonstration of your work to the lecturer

**Fails to attend the presentation**

**\*\*Zero marks will be allocated to presentation and iOS application components**

**\*\*Maximum marks of 30 marks will be allocated for this assessment.**

**Presentation**

Marks will be allocated on the basis of your ability to deliver a coherent, clear and well-prepared verbal presentation of your system. To achieve a mark of:

|  |  |
| --- | --- |
| **Grade** | **Criteria** |
| Fail | Not able to articulate and explain basic functionality of the application. |
| Marginal Fail | Able to explain some functionalities  Mostly not able to answer any questions about the system. |
| Pass | Your delivery and presentation must be clear, but may suffer from a lack of organization.  Able to explain all the functionalities and answer some questions |
| Credit | As above  Well organized and prepared  Able to clearly answer questions from your lecturer about your application. Your examples cover the majority of the functionality of the system, and are well chosen to do so. |
| Distinction | As above  Presentation must have an extra spark that makes it stand out from the other presentations.  This mark is reserved for presentations that are of an excellent standard. |

**iOS application (implementation)**

This will be assessed by your lecturer experimenting with your electronic submission. To achieve a mark of:

|  |  |
| --- | --- |
| **Grade** | **Criteria** |
| Fail | Your application cannot compile with any of the iOS development tools |
| Marginal Fail | Incomplete application and major functions not working |
| Pass | The application works properly having met basic requirements. |
| Credit | As above  Application of Model-View-Controller (MVC) design pattern and key Cocoa Touch Frameworks |
| Distinction | As above  Application must have an extra spark that makes it stand out from other systems. This mark is reserved for application that has outstanding functionalities, user friendly, object-oriented / structure and other Cocoa Touch Frameworks |

**Report (Documentation)**

This report must provide the complete contents based on the requirements to receive a mark of:

|  |  |
| --- | --- |
| **Grade** | **Criteria** |
| Fail | Incomplete report cannot be easily read by your lecturer and missing major parts |
| Marginal Fail | Incomplete report and missing some parts of the documentation |
| Pass | Report must be easily read and adequate meet documentation requirements with minor deficiencies such as layout, screen shots explanation and insufficient explanation |
| Credit | Satisfactorily meet all requirements better than above. |
| Distinction | A very good document has been produced showing no deficiencies in organization and requirements. The document is like a professional standard. |

**SUBMISSION REQUIREMENT**

**Deliverables**

* A softcopy of the iOS application and an application demo video must be submitted in a CD-ROM.
* Report (documentation) must be submitted in printed and softcopy form.

Documentation format

* Font Size: 12
* Font: Times New Roman
* Line Spacing: Single
* Paper: White A4 Size Only
* Soft bound binding: Comb binding (printed form)
* Presentation

You will be notified of the time and date of your presentation during the lecture and the presentation schedule will be made available on Moodle.

**Submission Deadline**

Date : refer to cover page

Time : 7:00 PM

Location : Administration department (Enterprise 3: 1-6)

**ACADEMIC INTEGRITY**

* You are expected to maintain the utmost level of academic integrity during the duration of the course.
* Plagiarism is a serious offence and will be dealt with according to APU and Staffordshire University regulations on plagiarism.