**Student Information Management System**

**Purpose:**

To computerized system software to help a university IT department with their activities and improve their services and management to track student basic information.

**Waterfall life cycle model:**

**What is waterfall life cycle model?**

The waterfall life cycle model it requires pre-planning and makes the process of development easy because it catches all flaws and errors which are going to occur during the developmental phase and how to handle them efficiently.

* **Requirement phase**

**Explored the concept:**

The University of Houston-Downtown needs a computer software system to help their IT department manage their student activities and other administrator roles in their website.

**Elicit the client requirements:**

The University of Houston-Downtown needs their software to be comparable with their computer servers and able to have internet capable access so their users either visitor or administrator can access their website with no problem at all.

* **Analysis (specification) phase:**

**Analyze the client requirement:**

To determine the customer needs not wants.

The University of Houston-Downtown wants their software system to accessible for either their IT department (administrator) or their student (user).

**Draw up the specification document:**

To interview the client to see what exactly he wants in the program and get everything in writing so they won’t be any misunderstanding.

The client wants their software to have the following student name, student ID, registered course, semester, exam score, the courses available and the GPA requirement for each semester.

**Draw up the software project management plan:**

So the software company (FoxHound) will developed a software for the University of Houston-Downtown based on the needs of the IT department.

**FoxHound will get a team together to work on the software:**

Each team member will focus on documentation, the programming code, the questionnaire so we need can meet the customer needs in writing so we can the program on time and budget.

* **Design phase:**

**Architectural designed:**

The program will be broken into two parts.

The administrator and the user.

Administrator:

The administrator role involves a great deal of multitasking and will work with teams to oversee the operations of the company, manage information efficiently and engage in planning according to the needs of the company.

User:

The user role is to review and monitor process that the current information that is kept in file is correct and valid. The user role will also monitor their educational process and performance but does not make changes.

**How the product does it:**

The product will help the IT department manage their educational activities to be correct and efficient to meet the needs of the student educational process.

* **Implementation phase:**

**Coding:**

Will be conducted by FoxHound Programming Department.

**Unit Testing:**

Will be conducted by FoxHound Programming Department.

Integration testing:

FoxHound Programming Department will have two source codes.

The Alpha and Beta release:

The Alpha release is unstable release of the program. It means that it can crash anytime and there can be a data loss. At this time, the software is completed but consist of many security issues and access problems which will deal with the crashes in the software and more.

The Beta release is the stable release of the program. It means it does not consist of any problems in the program and is completed. The same problem may arise in the program while in the executed state. The program consist of known or unknown bugs which are to be deal among the nature.

**Acceptance testing:**

After we have the software developed, we will get the client representatives of the University of Houston-Downtown to test their product and see if any improvement are needs to meet the customer needs.

We will deliver the final product on visual studio using C++ and get their serves ready to upload the program so the administrator can get ready to work right away.

**Post-delivery maintenance:**

**Corrective maintenance**

After the program has been deliver, post-deliver maintenance is need to address any bugs or any errors so the program will be up to date and running smoothly.

**Perfective maintenance:**

Foxhound guarantees their clients up to one year bug free post-delivery maintenance to make sure that the program is running effectively as need.

After the warranty expires, the client can either choose to leave the program as is or set up a payment plan.

A payment plan will discuss if the client wants to upgrade their software program or just run the program as intend.

**Retirement:**

No plans has been discuss about the software retirement.