INTERNATIONAL INSTITUTE OF PROFESSIONAL STUDIES, DAVV

Subject: System Analysis And Design

Project report-

Software Design Document [SDD]

Topic: Online Examination Software

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I thank and acknowledge each and every person who contributed towards the successful completion of this project in any significant amount.

TABLE OF CONTENTS

1. INTRODUCTION

1.1 PURPOSE

The main purpose of creating an online examination system is to automate the existing manual processes and provide the ease of attempting a test for students while sitting at their home from their devices simultaneously helping the evaluators to use computerised system to automatically check objective based questions and other subjective questions with less effort and paperwork.

The aim is to build a secure system for student registration, test evaluation and monitoring time that is effective and saves manual effort and time.

1.2 APPLICABILITY AND SCOPE

The applicability of this online examination conducting system is comparatively wider compared to manual system. With some manipulations it can find its application in the corporate sector. Physical presence of any candidate or the examiner is not required. They can access the system from any compatible device. Their location is not a determinant. It is also free from time limitations. A student can attempt the test for a fixed amount of time at any instant within the time frame.

1.3 ABSTRACT

We aim at developing an online examination system that is reliable, secure, error free and comprehensive for various fractions of users. Appearing for an exam in manual system i.e., physically in a university is very time-consuming process. Now the purpose of

this system is to overcome the shortfall faced in the previous systems already working in the area. The website will be secure, and properly working on WAN. It will be speedy with good interface. The university may conduct examination in various countries and in different languages. It would support multiple platforms at least those used by people commonly.

2. SYSTEM OVERVIEW

The online examination system is designed so as to allow the student to register into the system through an enrolment process, appear for the exam and receive a report of his result. It also must provide tools for evaluator to examine the answer sheets, mark them accordingly. They must also be able to access the student database. This system needs to be secure and robust to avoid any kinds of errors of failure of software.

Normally, design is performed in the following in the following two steps:

1. Primary Design Phase:

In this phase, the system is designed at block level. The blocks are created on the basis of analysis done in the problem identification phase. Different blocks are created for different functions emphasis is put on minimising the information flow between blocks. Thus, all activities which require more interaction are kept in one block.

2. Secondary Design Phase:

In the secondary phase the detailed design of every block is performed.

3. BRIEF SURVEY OF AVAILABLE TECHNOLOGIES

We require various tools and applications to design the required system. Some of them include:

1. ASP.NET 2005
2. Framework 2.0
3.Microsoft-sql server 2000
4. Microsoft word processor

ASP.NET 2005:

ASP.NET 2005 is a Microsoft technology for building the web-based application and services. ASP.NET application consists of forms ,controls, classes and procedures.

Forms are windows upon which you build your user interface are the building blocks of the user interface. Controls also called ActiveX controls, are interface tools , such as labels ,textbox and command buttons, that you use to display information to the user, gather information from the user, and respond to user actions. Classes are templates from which you can create your own objects at run time.

Procedures are small routines you write that are callable from anywhere in your application. These routines will perform a function for you that you write once but can call many times.

An application is made up of forms, modules and classes. A form is made up of properties, events and controls. Controls are also made up of properties and events

Some Features Of ASP.NET

- Language interoperability : a one language code is to interact with other language.

- EDP(Event driven programming language): it is an Event Driven Programming language(i.e., we write code on its event and drive the program).
- Rapid Application Development(RAID).
- Allows the creation of COM components such as ActiveX controls.
- Includes good debugging facilities.

FRAMEWORK 2.0

Dot net framework is a platform that is provided by Microsoft technology in which we can develop web-based application, window-based application and console base application with C#(c sharp),VB and J#(J sharp) and other 22 Language.

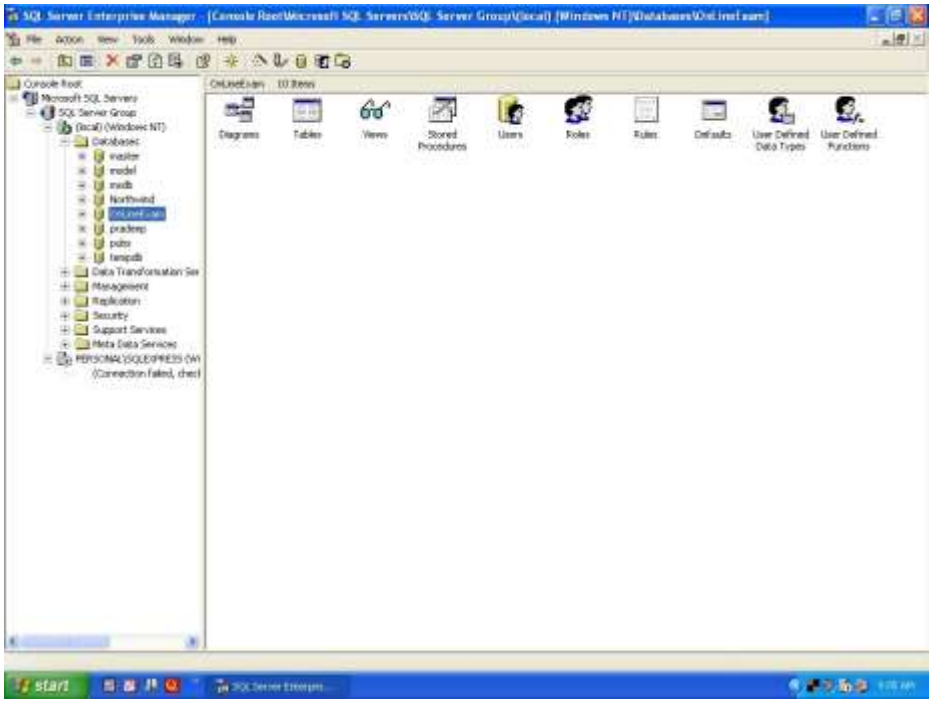
MICROSOFT-SQL SERVER 2000

Microsoft SQL Server fulfils these responsibilities :

- ✓ Reduction and redundancy : Centralized control of the dba avoids the unnecessary duplication of data and effectively Reduces the total amount of data storage required. It also eliminates the extra processing and of the inconsistencies e.g., Same format of grade card for all student.
- ✓ Sharing data : Any number of application program of users can share the same database. For example, we can access the list of study centres.
- ✓ Data integrity : Data integrity means that the data contains in the database both accurate and consistent.
- ✓ Data security : In this facility the confidential data must not be accessed by unauthorized person.
- ✓ Rapidly Accessing Data : SQL Server provides rapid access to data by utilizing indexes and storing frequently accessed data in memory.

SQL Server Enterprise Manager :

The Enterprise Manager is the central console from which most SQL Server database-management tasks can be coordinated. SQL Enterprise Manager provides a single interface from which all servers in a company can be managed.

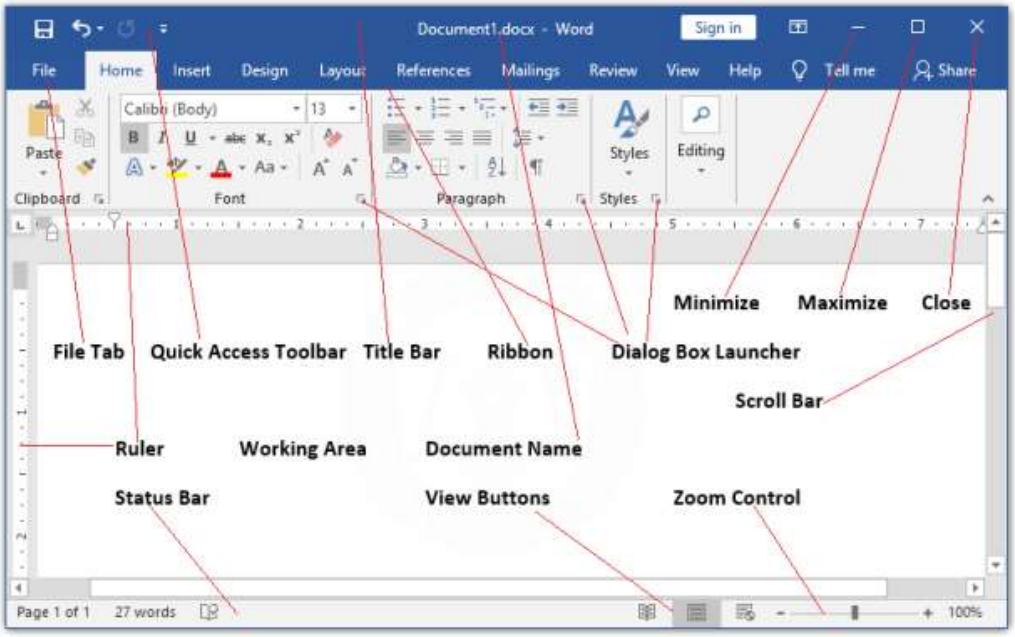


MICROSOFT WORD PROCESSOR

Word processing software is used to manipulate a text document, such as a resume or a report. You typically enter text by typing, and the software provides tools for copying, deleting and various types of formatting. Some of the functions of word processing software include:

- Creating, editing, saving and printing documents.
- Copying, pasting, moving and deleting text within a document.
- Formatting text, such as font type, bolding, underlining or italicizing.
- Creating and editing tables.

- Inserting elements from other software, such as illustrations or photographs.
- Correcting spelling and grammar.



4. FRONT END DESIGN TECHNOLOGIES

The .Net Initiative

Microsoft has introduced the .NET initiative with the intension of bridging the gap in interoperability between application. It aims at integrating various programming.

The .NET initiative offers a complete suite for developing and deploying applications. This suite consists of .NET services, and the .NET framework.

.Net Products

Microsoft has already introduced Visual Studio .Net, which is tool for developing .Net applications by using programming languages such as Visual Basic, C# and Visual C++. To ensure interaction between different applications, all .Net products use Extensible Markup Language (XML) for describing and exchanging data between application.

.Net Services :-

.Net delivers software as web services. Therefore, User can subscribe to a web service and use it as long as they need it, regardless of the hardware and software platform. Microsoft is coming up with its own set of web services, known as my services. These services are based on the Microsoft Passport Authentication service, in addition to the web services provided easily with the .Net environment.

The .Net Framework

It is the foundation on which us design, develop and deploy application. It's consistent and simplified programming model makes easier to build applications.

5. BACKEND DESIGN TECHNOLOGIES

This section is built from the very renowned software package called as the Microsoft Office. It is designed to build the various database, and to perform other data work. SQL provides an extremely powerful, easy to use database that will serve our needs when you required the power of fully relational database. SQL is also helpful create a variety of database as well as how to enter, edit and final data in existing database.

SQL :

SQL server 2007 utilities, such as backup and restore, run much faster and have less effect on server operations. SQL Server 7.0 also includes a variety of new features designed to support the underlying database architecture and to provide more flexible system management. SQL Server also include a number of new features designed to reduce database backup and recovery times. A different backup captures only those data pages that have changed after the last database backup. Many times, differential backup can eliminate much of the time the server spends rolling transaction forward. With SQL Server 7.0 a portion of the database can be restored or rolled forward to minimize recovery time in the event of media failure. Restoring a backup is easy because the restore process automatically creates the database and all the necessary files. SQL server 7.0 supports backup to same tape media with another backup, such as those written by the Microsoft Windows NT backup program.

6. SYSTEM ARCHITECTURAL DESIGN

6.1 PRELIMINARY PRODUCT DESCRIPTION

The system will facilitate online examination and documentation of results. The system can conduct various examinations for various subjects. All one needs to do is change the database accordingly.

Project deals with registration or enrolment of students, submission of registration forms and issuing unique id and password to enrolled students

This application has Login module we need the user's name and password facility and credentials should be checked properly at the time of login for student, expert, controller and Exam Dept Admin.

The application has schedule Module send the exam schedule to the student.

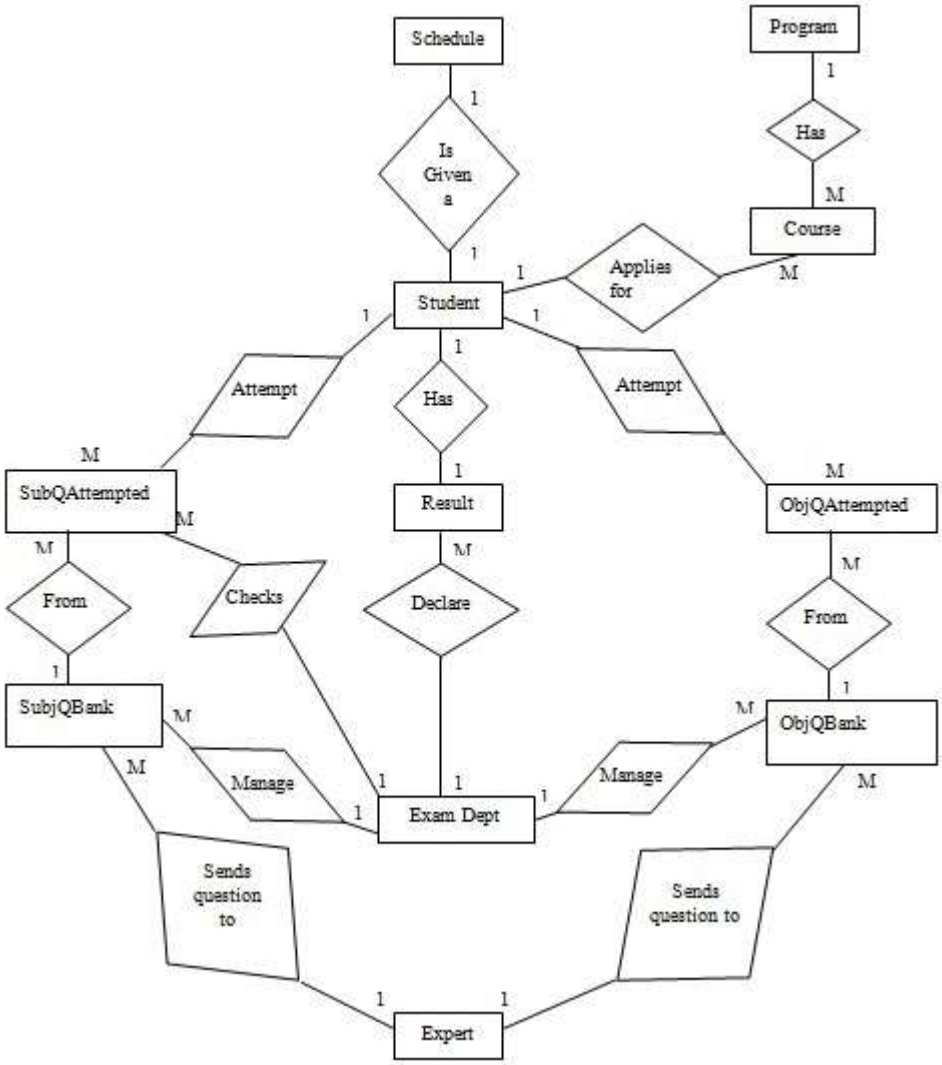
The application has question bank module for the examination could be changed dynamically.

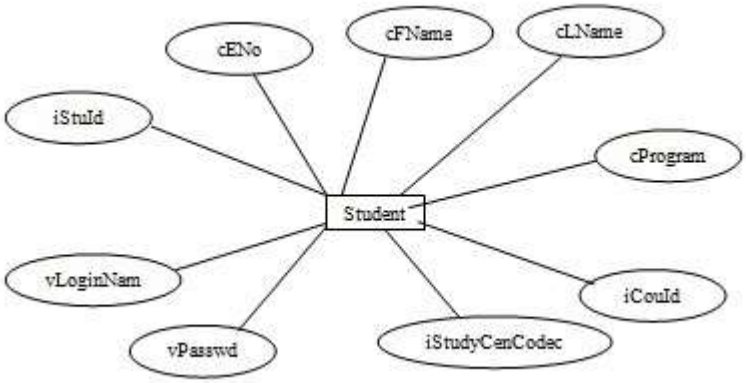
The application will facilitate Objective answers module will be checked automatically by the system from the database and the subjective answer manually checking by exam department will take place.
This application has exam module When the student starts the exam the timer will start automatically and show the student how much time is left.

This application has result module display the result of each student and send by the exam. Dept.

Evaluation and printing of student's result will be supported Like any other software application project we need to use good software development practices when faced with working on a web application. Otherwise, the project would not remain in control and we would face problems with timeliness, budgets and quality.

6.2 ER DIAGRAM





6.3 DATA FLOW DIAGRAM

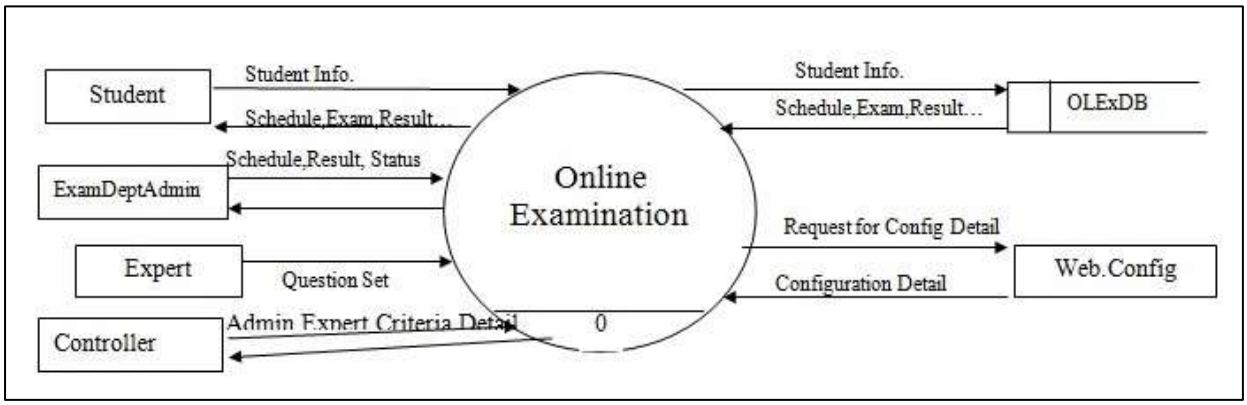


FIG: 0 LEVEL DFD

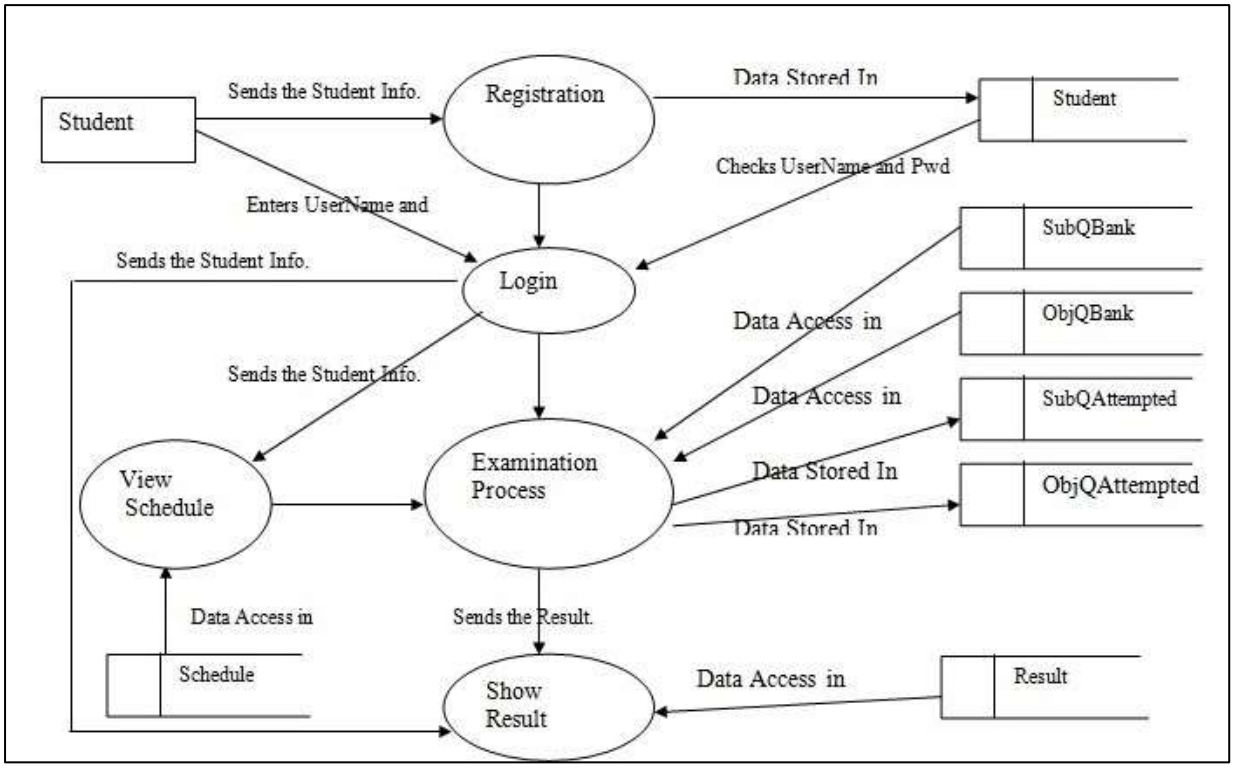
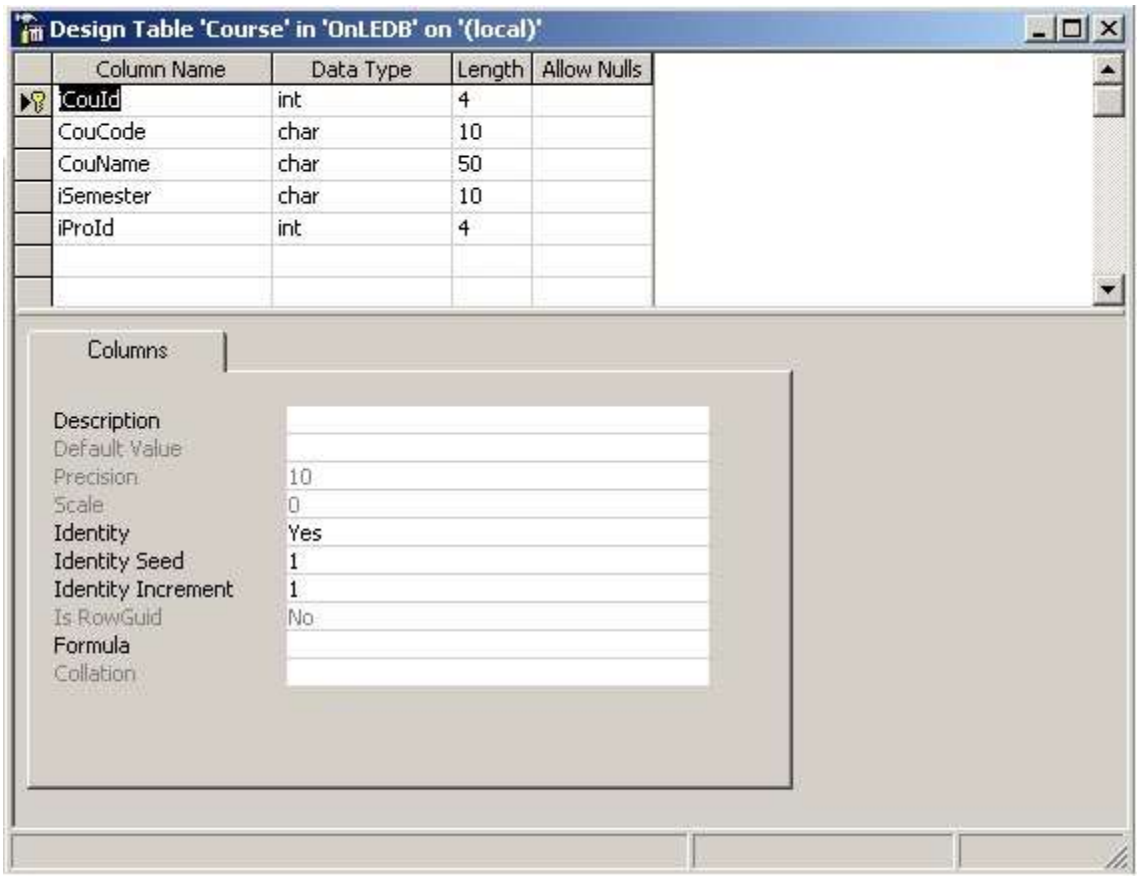


FIG: 1 LEVEL DFD

7. DATA STRUCTURE

Example Table- Course



8. USER INTERFACE DESIGN

User Interface Design is concerned with the dialogue between a user and the computer. It is concerned with everything from starting the system or logging into the system to the eventually presentation of desired inputs and outputs. The overall flow of screens and messages is called a dialogue.

The following steps are various guidelines for User Interface Design:

1. The system user should always be aware of what to do next. 2.

2. The screen should be formatted so that various types of information, instructions and messages always appear in the same general display area.
3. Message, instructions or information should be displayed long enough to allow the system user to read them.
4. Use display attributes sparingly.
5. Default values for fields and answers to be entered by the user should be specified.
6. A user should not be allowed to proceed without correcting an error.
7. The system user should never get an operating system message or fatal error

BIBLIOGRAPHY

The information and details used in this document are mostly my original work referenced from some books and articles. I used google for problem solving, William S. Davis and David C. Yen's The Information System Consultant's Handbook and Analysis and Design of Information Systems by V. Rajaraman (PHI Publications). I used certain websites to gather information about the available softwares for software designing [https://study.com/academy/lesson/what-is-word-processing-software-definition-types-examples.html]. I also used softwares to design the ER diagram and the data flow diagram [https://www.lucidchart.com/].

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