

Project Synopsis

“QUIZ GAME”

Submission Details

Name :
1. Sayantika Bose
2. Prithwish Raymahapatra

Address :
1. Duttapukur
2. Belgharia

Contact no :
1. 6291400241
2. 6294785483

Enrollment No :
1. 24400120043
2. 24400120045

Study Center : Techno Engineering College Banipur

Program Code :

Course Code :

Submission Date : 30/1/22

Signature :

Proforma for Approval of Project Proposal

-: Guide's Bio Data:-

Synopsis Contents

S.no	Contents	Page No.	Remarks	Sign
1	Title of the Project.	5		
2	Introduction and Objectives of the Project.	6		
3	Project Category (RDBMS/OOPS/Networking/Multimedia/Artificial Intelligence/Expert Systems etc.).	7		
4	Tools/Platform, Hardware and Software Requirement specifications.	8-9		
5	Problem Definition, Requirement Specifications (Detailed functional Requirements and Technical Specifications), Project Planning and Scheduling (Gantt chart and PERT chart).	10-16		
6	Scope of the solution.	17		
7	A complete structure which includes: i. Number of modules and their description to provide an estimation of the student's effort on the project. Along with Module. ii. Data Structures as per the project process logic of each requirements for all the modules. iii. Process Logic of each module. iv. Implementation methodology	19-22		
8	Implementation of security mechanisms at various levels	23-24		
9	Future scope and further enhancement of the project.	25		

Title of the Project

“Quiz Game”

Introduction & Objective(s)

Introduction:-

Quiz Contest is an android application that has general questions related to current affairs and computer! it has multiple choice questions with time limit and it also calculate scores of each correct answer! it is good for students of every age group. It helps in increasing general knowledge about world, sports and computer etc. Don't need to register simply give any user name and password. It will be saved automatically and you can login again with same user name and password. Don't have to worry about the past score. The application helps the user to increase his/her knowledge since smartphone mobiles are being widely used by general population and students, the Quiz Contest application can be provided on the student's mobile.

Objective(s):-

The main objective of "Quiz Contest" is to facilitate a user friendly environment for all users and reduces the manual effort. In past days quiz is conducted manually but in further resolution of the technology we are able to generate the score and pose the queries automatically. The functional requirements include to create users that are going to participate in the quiz, automatic score and report generation and administrative tasks like add, delete, update or admin privilege users. In this application, all the permissions lies with the administrator i.e,& specifying the details of the quiz with checking result will show to interviewee or not, addition of question and answers, marks for each question,set timer for each quiz and generate report with score or each quiz.

2.Project Category

This application is basically a client server based application system that means though having users interaction and input-output conversation, yet it will be operated from any machine, which are attached with the server. Basically it will maintain a server based communication and exchange ideas and also they can receive services from every corner of the organization. Any type of response can generate on the real time basis, i.e. instantly the user can get their answers against various queries.

There are various features in which a project can be categorized. The proposed project has been divided into three main categories, which can be described as:

Front – end: -

The front-end tool of this proposed project is C programming. Dev c++ is a complete suite of tools for building C programming applications. In addition to building this application we can use File Handling in C programming.

Back – end: -

The back end of the project is supported by Text File which will act as a dataset for question set

and answer set. And we will use File Handling in C programming to import those questions and

answers in the application .

Client – Server Architecture: -

The project is also a client-server based application that means though having users interaction and input-output conversation, it can be

operated from any machines that are attached with the server. Basically it will maintain a server based communication and the user can receive information instantly against their various queries. The required information of any album made by the user in the client machine can be derived from the server machine. The server machine distributes all its data and information to the client machines that can help the users.

3. Tools/Environment Used

The project is to be developed using C. For this reason a minimum hardware configuration of Pentium IV 2.90 Ghz processor is needed. Hardware with better configuration will provide much better platforms to the software to operate. However, the hardware configuration that is to be used to develop the project as follows: -

- ❖ Intel Pentium with 2.90 GHz processor speed.
- ❖ Hard Disk 500 G.B
- ❖ H.P DVD Writer
- ❖ Ram 4 G.B (ZION)
- ❖ Peripherals logitech mouse and keyboard.
- ❖ Display 15” TFT Monitor (ACER/SAMSUNG)

After the description of the hardware configuration, comes the description of the software configuration .The most important fact is the Operating System that forms the base of the languages to be used for the development. If the compiler are not supported by the Operating System then it is impossible to develop the project, like Dos, Windows 98 does not support GCC Compiler. The Operating System to be used for the development of the project is “Windows XP”.

Windows XP: -

Windows XP will provide increased speed and security at the desktop, while offering better hardware compatibility and enhanced features. International Technology Services (ITS) released the Windows XP operating system in a three-phase approach. This phased deployment process provided ITS’ with valuable customer feedback, data collection and analysis, which resulted in the completion and final release of the Windows XP Operating System. Windows XP offers several new tools and features that focus on improved productivity, security and usability.

There is several key performance improvements included in Windows XP.

Users will notice faster boot-up times, improved program responsiveness and

with the 32bit OS, equipment and software can take advantage of additional RAM.

Through the user account control (UAC) feature windows XP makes it easier and more secure to run programs as a standard user instead of an administrator. The Windows firewall is also enabled to provide additional protection against malicious software. Mobile users and remote workers will notice a big improvement with the wireless networking features of Windows XP.

GCC Compiler :-

The GNU Compiler Collection, commonly known as GCC, is a set of compilers and development tools available for Linux, Windows, various BSDs, and a wide assortment of other operating systems. It includes support primarily for C and C++ and includes Objective-C, Ada, Go, Fortran, and D. The Free Software Foundation (FSF) wrote GCC and released it as completely free (as in libre) software. GCC is a toolchain that compiles code, links it with any library dependencies, converts that code to assembly, and then prepares executable files. It follows the standard UNIX design philosophy of using simple tools that perform individual tasks well. The GCC development suite utilizes these discrete tools to compile software. When you run GCC on a source code file, it first uses a preprocessor to include header files and discard comments. Next, it tokenizes the code, expands macros, detects any compile-time issues, then prepares it for compilation. It is then sent to the compiler, which creates syntax trees of the program's objects and control flow and uses those to generate assembly code. The assembler then converts this code into the binary executable format of the system. Finally, the linker includes references to any external libraries as needed. The finished product is then executable on the target system.

Problem Definition, Requirements Specifications, Project Planning & Scheduling

Problem Definition:-

Quiz Contest is an application developed to conduct a quiz, before start of the quiz, the rules and regulations are displayed that includes description of the time limit number of questions to be answered and scoring method. Quiz is started by displaying one question with four options each based on computer and general knowledge. If the answer is correct score is incremented by five and no negative marks for wrong answers.

Problem Recognition:-

In this phase the analyst should clarify –

- a. Who is behind the request for this work?
- b. Who will use the solution?
- c. What will be the economic benefit of the successful solution?
- d. Is there any other source for the solution that the organization needs?

Getting answers all those questions by himself/herself, the analyst starts working and he issues some questionnaires to the future users for gathering information and then after that concentrates on the feasibility studies.

2. Problem Statement:-

Existing System:

- the user has to login first by giving any user name and password it will be added automatically in database so that user can login again in future by same user name and password!

- then welcome(user profile) will be appear user has to choose any o three option ‘startgame’, ‘high score’& ‘logout’.
- After choosing start game continue page will be appear to continue game.
- After Clicking on continue multiple choice questions will come automatically one by one with a specific time limit!
- User has to choose any of our existing options and then the user has to hit the submit button and each right answer will automatically count the score!
- At the end of the game it will show the score of the user!

All these findings demand new applications which will reduce manual work and do everything automatically! Also the existing systems has some major drawbacks which motivate us to develop new systems. Those drawbacks are as follows:

- Quest won’t get updated automatically and needs to update manually!
- existing systems have no type of fields like questions on history, game ,sports ,geography etc!
- There is a possibility of hanging down the existing systems!

Proposed System:

Unlike the websites where you need to make account or every quiz you want to play using this application based on android, you just have to login by user name and password and then you will get access to all quizzes rom it. The proposed system is an application or the Android platform mobiles will help in improving the knowledge and accuracy. Android is a linux based operating system designed primarily or touch screen mobile devices such as smart phones and tablet computers developed by google in conjunction with the open handset Alliance. The proposed system will be developed or Android mobiles only because the market share of Android is more than other operating systems.

System Requirements Specifications (SRS):-

Requirement analysis provides a clear and thorough understanding of the product to be developed.

1. Project Background:-

This requirements document describes the requirements of our Quiz Game System. It does not describe all the functionalities of a perfect quiz game application but its a simple C programmed application

2. Requirement identification:-

The project titled Quiz Game is an application that will help people to increase their general knowledge. The project is developed in C which mainly focuses on importing and exporting of data in text files which is a part of file handling in C.

From this system, the expected output is the system that can offer a set of simple general knowledge, computer based, technical and history based question. User will attend the questions which are MCQ based questions. If the answer is correct, the user will get the score and go to the next question and so on.

Functional Requirements:-

The purpose of the investigation is to collect requirements for developing broad solutions for the purpose of feasibility study. Material (questions) collected in the investigation not only acts as a basis for forming the several board solutions of the proposed system but it also provides the much needed feedback for selection of the final candidates system among the solutions suggested in the course of feasibility study. Are the main requirements to be fulfilled by the system.

Functional Requirement(s)...

The project should contain:-

The project must accommodate the new requirements specified by the end user.

The project must be easy to use and simpler to understand i.e. it should have easy to use navigation tools with some sort of assistance (tool tip text) attached with them.

Should serve almost all desires of the common user, i.e. must meet the basic requirement criteria for a good Data Retrieval, Manipulation & Storage System for a cooperative society.

Through diagnosis we can identify the project's sign and symptoms. A symptom is a condition or a set of conditions that indicates the existence of a problem. Symptoms occupy an essential position in the problem solving process for the signal the existence of problem and guide the search for the underlying problem.

In future, we will enhance the project and enhance the web enable services so that one can buy or sale the equity through the online facility. More indicators will be included so that more clear view on the price of the equity can be found.

3. Technical Requirements:-

a. System Features:-

- **Validation:** On the completion of each form in the system, the system will use a set of validation functions to ensure that information is of the right type in each field.
- **Make Recommendations:** The system should be able to make recommendations to the tutor which will be decided once an application has been submitted by the admissions office. The system could make its recommendation based on the ranking of the application, where any rank above a certain threshold would be accepted and any below would be rejected.
- **Statistics:** If the admissions office so wishes, they should be able to view statistics gathered by the system regarding applications. These statistics should be displayed on a page with individually expandable sections, such as extending the number of applications received from the past year to the past two years.

- **Report Generation:** Generate reports based on the selected criteria.

4. Non-Functional Requirements:-

a. Performance Requirements ...

Some Performance requirements identified is listed below:

The software shall support use of multiple users at a time.

b. Safety Requirements ...

The program may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the backup.

c. Security Requirements ...

We are going to develop a secured dataset for the system. There are different categories of users namely customers, administrator, staff, students etc., Depending upon the category of user the access rights are decided. It means if the user is an administrator then he can be able to modify the data, delete, append etc. All other users other than library staff only have the rights to retrieve the information about the dataset.

Software Quality Attributes ...

The Quality of the program is maintained in such a way so that it can be very user friendly to all the users of the program.

Hardware Constraints...

The system requires a dataset in order to store persistent data. The program should have backup capabilities.

Software Constraints...

The development of the system will be constrained by the availability of required software such as GCC Compiler (as it is c program).

Design Constraints...

The system must be designed in such a way that will be easy to use and visible on most of the computers.

5. Feasibility Study:-

Before the system development proposal has been taken into consideration, an elaborate feasibility study on the basis primary investigation has been done. It includes

1. Economic Feasibility,
2. Technical Feasibility,
3. Behavioral Feasibility, and
4. Legal Feasibility.
5. Operational Feasibility

Economic Feasibility:-The procedure is to determine the benefits and saving that are expected from a candidate system and compare them with costs. If the benefits outweigh costs, then decision is made to design and implement the system. Considering the facts it is become evident that the system will be economically feasible both for developer as well as for client's respect.

Technical Feasibility:-Technical feasibility centers on the existing computer system (hardware, software, etc.) and to what extent it can support the proposed addition. If the budget is a serious constraint, then the project is judged not feasible. Here it is not a constraint altogether.

Behavioral Feasibility:-People are inherently resistant to change, and computers have been known to facilitate change. An estimate should be made of how strong a reaction the user staff is likely to have toward the development of a computerized system. This is not a major problem in this area.

Legal Feasibility:-A determination of any infringement, violation or liability that could result from the development of the system. But the system to be developed will be 100% legal.

Operational Feasibility: -The management & operators desire to be well acquainted with the requisite skill needed. Here most of the members in development team having technical expertise. So, by these above mentioned feasibility studies, it is ensured that the proposed project is economically cost effective, technically viable, the states and events are correlated logically, and there is no legal constraint.

6. Cost and Benefit Analysis:-

In developing the cost estimates for this system several cost elements were taken into consideration. Among them was hardware, software, facility, operating and supply costs. Hardware costs related to the actual purchase of the computer and peripherals (for example, printer, disk drive, tape unit). Determining the actual cost of hardware is generally more difficult when various users than for dedicated stand-alone system share the system. Software costs relate to the buying of the software required to develop the project as well as the software required to run the application in the organization.

1. Facility Costs are expenses incurred in the preparation of the physical site in organization where the application or the computer will be in operation. This includes wiring, flooring, acoustics, lighting and air conditioning. These costs have been treated as one-time costs.
2. Operating costs include all cost associated with the day-to-day operation of the system. The amount depends on the number of shifts, the nature of the applications and the caliber of the operating staff.

3. Supply costs are variable costs that increase with increase use of papers, ribbons, disk, and the like. They have been estimated and included in the overall cost of the system.
4. The management & operators desire to be well acquainted with the requisite skill needed.

Scope of The Solution

It is focused to user who want to use this system, what platform they want to use and what functionality from the system.

User

Quiz Game is focused on basic and technical quiz and this type of system can be used by anyone.

Platform

Quiz Game is developed on C programming that uses GCC compiler.

ii. Functionality

The main functionality of the Quiz Game is a knowledge increasing process.. This means users can the develop their general knowledge skills by attempting questions that are particularly designed for that purpose.

Besides that, the user also can check their scores based on their performance. The system is designed in such a way that it can either increase or decrease the score based on the answer given by the user in the game. If answered correctly the score is increased by 5 point and if wrongly answered then no point is provided to the user.

* Admin also can view the score of any user .

Number of Modules & Their Description:-

After analyzing the requirement we decide that we need to use “File Handling” .

System consists of:-

Module Description:-

This project is modularized as the following:

- 1.Question Bank
- 2.Answer Set
- 3.Displaying questions on the screen
- 4.Points
- 6.Scoreboard

Question Bank

The question dataset has been made in a text file which consists of questions based on general and technical knowledge. These datas are being imported in the program using file handling procedure. These datas are stored using the data structure “structure”.

Answer Set

The answers are written on a text file which has been used as an answer dataset and is being imported in the program using file handling procedure. These datas are stored using the data structure.

Displaying questions on the screen

In this section the questions are being displayed with multiple choice answers as the frontend process. Here, the user has to write the correct answer in order to answer the given question.

Points

Each question consists of 5 points each and if the answer given by the user is correct then the user will be awarded with 5 points and if the answer is wrong then no points are awarded.

Scoreboard

After the user have answered all the questions then the score he/she have scored , no. of questions

answered , the no. of questions wrongly answered,the no. of questions correctly answered is being

shown at the end of the quiz as a scoreboard

The Data Structures as per Project Requirements:-

1. Structure
2. Arrays

Process Logic of Each Module:-

Structured Analysis and Structured Design (SASD) is deadly needed for a software development to minimize the error from the very beginning stages.

Structured Analysis is the activity of deriving a structured model of the requirements of a system, on the other hand **Structured Design** is the development of a blue-print of a computer system solution to a problem, having the same components and relationships as the original problem had. Both structured analysis and structured design techniques are based upon the idea of a black box description.

Goals:-

The major goal of SASD is to improve software quality and reduce the risk of failure. The secondary goals are:

1. Need to obtain a clear and complete specification.
2. Documentation for the system.

Benefits of SASD:-

The benefits of SASD include the following: -

1. SASD creates a map of the system, and these maps can be used for tractability, maintenance, or enhancement activities in the future.
2. SASD places emphasis on analysis and design activities, rather than implementation. This encourages the project team to be thoughtful about the system's fundamental purpose and the engineering details. Gradually, depending upon the various analysis and decision taken, after fact finding,

feasibility studies etc, the project team develops software documentation as they progress through development.

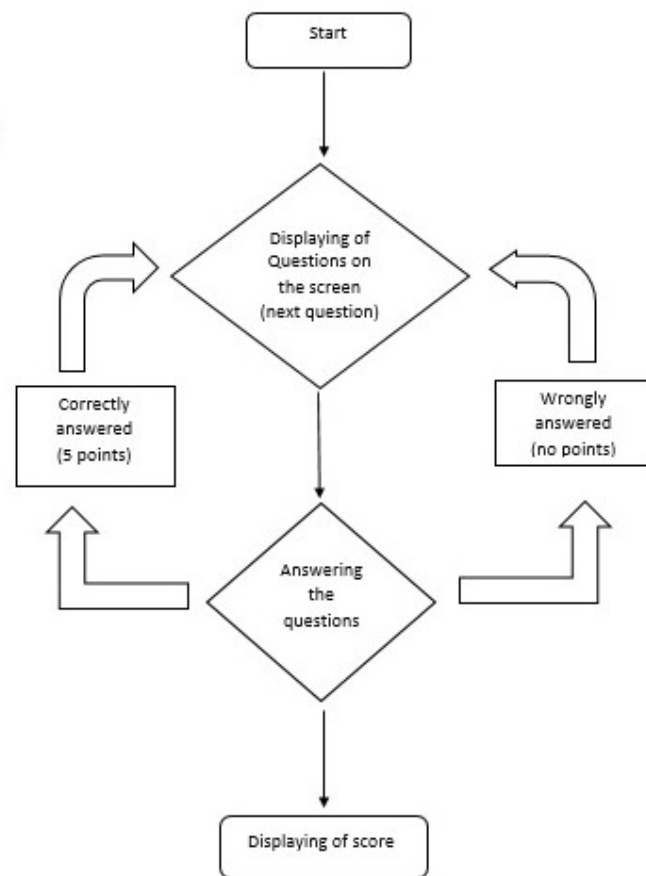
System analysis is a process of gathering and interpreting facts, diagnosing problems and the information to recommend improvements on the system. It is a problem solving activity that requires intensive communication between the system users and system developers. System analysis or study is an important phase of any system development process. The system is studied to the minutest detail and analyzed. The system analyst plays the role of the interrogator and dwells deep into the working of the present system. The system is viewed as a whole and the input to the system are identified. The outputs from the organizations are traced to the various processes. System analysis is concerned with becoming aware of the problem, identifying the relevant and decisional variables, analyzing and synthesizing the various factors and determining an optimal or at least a satisfactory solution or program of action.

A detailed study of the process must be made by various techniques like interviews, questionnaires etc. The data collected by these sources must be scrutinized to arrive to a conclusion. The conclusion is an understanding of how the system functions. This system is called the existing system. Now the existing system is subjected to close study and problem areas are identified. The designer now functions as a problem solver and tries to sort out the difficulties that the enterprise faces. The solutions are given as proposals. The proposal is then weighed with the existing system analytically and the best one is selected. The proposal is presented to the user for an endorsement by the user. The proposal is reviewed on user request and suitable changes are made. This is loop that ends as soon as the user is satisfied with proposal.

Preliminary study is the process of gathering and interpreting facts, using the information for further studies on the system. Preliminary study is problem solving activity that requires intensive communication between the system users and system developers. It does various feasibility studies. In these studies a rough figure of the system activities

can be obtained, from which the decision about the strategies to be followed for effective system study and analysis can be taken.

Here in the project Quiz Game(, a detailed study of existing system is carried along with all the steps in system analysis. An idea for creating a better project was carried and the next steps were followed.

Flow Chart of the Current System Model:-

Implementation Methodology:-

Taking Quiz competition efficiency to the next level, “**Quiz Game**” now allows to better your intelligent quotient (I.Q) and also improve your general knowledge and also technical knowledge.

After a proper implementation, the system should

1. Improve general knowledge skills and technical skills.
2. Increase your intelligence quotient (I.Q).
3. It takes the quiz competition to the next level and anyone from anywhere can attempt it.;

Implementation of Security Mechanisms

The protection of computer based resources that includes hardware, software, data, procedures and people against unauthorized use or natural Disaster is known as System Security.

System Security can be divided into four related issues:

1. Security
2. Integrity
3. Privacy
4. Confidentiality

System Security refers to the technical innovations and procedures applied to the hardware and operation systems to protect against deliberate or accidental damage from a defined threat.

Data Security is the protection of data from loss, disclosure, modification and destruction.

1. **System Integrity** refers to the proper functioning of hardware and programs, appropriate physical security and safety against external threats such as eavesdropping and wiretapping.
2. **Privacy** defines the rights of the user or organizations to determine what information they are willing to share with or accept from others and how the organization can be protected against unwelcome, unfair or excessive dissemination of information about it.
3. **Confidentiality** is a special status given to sensitive information in a database to minimize the possible invasion of privacy. It is an attribute of information that characterizes its need for protection.

Security in Software-

System security refers to various validations on data in form of checks and controls to avoid the system from failing. It is always important to ensure that

only valid data is entered and only valid operations are performed on the system.

The system employs two types of checks and controls:

Client Side Validation-

Various client side validations are used to ensure on the client side that only valid data is entered. Client side validation saves server time and load to handle invalid data. Some checks imposed are:

1. We have developed it in C programming so we have used the “String.h” library to ease the operation with string in the program.
2. Questions have to be answered ,if not then the next question will not appear.
3. We have also used some functions of the “string.h” library to ensure the correctness of the answers.

Server Side Validation-

Some checks cannot be applied at client side. Server side checks are necessary to save the system from failing and intimating the user that some invalid operation has been performed or the performed operation is restricted. Some of the server side checks imposed is:

1. As we have used a text file as our dataset so some checks has been set up to ensure that the datas are being read correctly from the text file, for example we have one line gap between each data so that questions/answers are being read properly and being stored in their respective places.
2. Different structures have been set up to store the questions and the answers that has been imported from the text file respectively.

Future Scope & Further Enhancement

As a conclusion, Quiz Game will develop general and technical knowledge among people. To develop this system, file is still used as a reference to yield a system that give satisfied to the user. Consistent with expand of technology and arrangement infrastructure at P m , hence this system are developed to tidy up management system available and improve a booking system about transport information. After that, the concern not lag in a current technology in effort to become a High Education Institution which is developed from infrastructure and also academic. The next chapter will discuss about the project literature review and project methodology regarding the proposed system

