Java Odyssey

A PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report **"Java Odyssey(Quiz Application)"** is the bonafide work of "Aniket Sharma**"** who carried out the project work under my/our supervision.

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INTRODUCTION

1.1.   Identification of Client /Need / Relevant Contemporary issue

1. Issue:

The issue at hand is the suboptimal engagement of students in traditional learning environments and the need for more interactive and engaging educational tools.

2. Statistics:

According to the National Education Association (NEA), standardized test scores in traditional classrooms have shown a consistent decline of 10% over the past decade, indicating a significant issue with student engagement and learning outcomes.

3. Documentation:

A report by the World Economic Forum highlights the limitations of conventional teaching methods in meeting the needs of the 21st-century workforce. This documentation underscores the importance of innovative educational solutions.

1.2.   Identification of Problem

The primary motivation behind creating the quiz application was to address several key challenges and needs:

1. Educational Engagement: The need to engage and educate users, students, or learners in an interactive and informative manner was a significant problem. Traditional methods of learning or information delivery may not be as engaging or effective in today's digital age.

2. Assessment and Evaluation: There was a requirement for a tool that could efficiently assess and evaluate the knowledge, understanding, or skills of the users. Traditional assessment methods might be time-consuming and less dynamic.

3. Accessibility and Convenience: Accessibility to educational or quiz content on various devices and at the convenience of the user was a challenge. Traditional paper-based quizzes or assessments can be less flexible in this regard.

LITERATURE REVIEW/BACKGROUND STUDY

2.1.   Existing solutions

There are so many Projects are available on Quiz Application . There are as follow –

> **Quiz Up**

Combining trivia and a social network, Quiz Up invites you to choose from more than 1,200 topics, take part in challenges and illustrated quizzes and post about your interests. You can play against friends or go up against millions of the platform"s users.

> **Heads Up!**

Suitable for all the family, this game sees players guess words/names/titles, which may include celebrities, characters, movies, books and songs, which are described or acted out by their friends. Just think of it as charades for the smartphone generation.

> **Who Wants To Be a Millionaire**

The classic game which captured the hearts of audiences worldwide is now available on mobile, meaning you can relive the nail-biting build up as you bid to become a (virtual) millionaire. Features include 50:50, ask the Audience and Ask the Expert. You can play against friends and family too.

> **Popcorn Trivia**

Test out your knowledge of the silver screen with this addictive movie trivia app. Questions, based on classic films, blockbusters and fan favorites, span picture rounds and multiple choices.
Each question is followed with an interesting fact. Play solo or against others.

2.2.   Problem Definition

Java Odyssey is an application developed to conduct a quiz based on time constraints. Quiz Contest system is accessed by entering the user name and password which is added to the database. 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 methods. Quiz is started by displaying one question with four options each based on computer and general knowledge. if the answer is correct, 7 score is incremented by four and no negative marks for wrong answers. If the time exceeds 15secs next question will come automatically after giving few limited question's answer quiz application will finally direct you to the score page. Final score will be displayed and updated in the database with username.

2.3.   Goals/Objectives

Goal: "Our Goal is to develop an application for the users in which a user can attempt any number of quizzes related to his/her choice."

Objective: The main objective of "Quiz Application" 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 creating users that are going to participate in the quiz, automatic score and report generation and administrative tasks like add, delete, update for 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 for each quiz.

DESIGN FLOW/PROCESS

3.1.   Evaluation & Selection of Specifications/Features

In the critical phase of evaluating and selecting specifications and features for our quiz application, we have meticulously scrutinized a wide array of sources, from existing literature to user needs and technical feasibility.

- Thorough Evaluation: We conducted an in-depth review of existing literature, research papers, and expert recommendations to identify potential specifications and features for our quiz application.

- User-Centric Approach: We considered the needs and preferences of our target audience, prioritizing features that directly enhance the user experience.

- Feature Prioritization: Features were categorized into essential, desirable, and optional, ensuring that we focus on the core functionality while allowing for future enhancements.

- Technical Feasibility: We assessed the technical feasibility of each feature, taking into account development complexity and resource constraints.

- Competitor Analysis: We examined similar applications in the market to identify gaps and opportunities for differentiation based on unique features.

- User Feedback and Testing: User input played a crucial role in shaping our feature set, ensuring that our application meets user expectations.

- Scalability and Future Growth: We considered the long-term scalability of our application, making it easier to incorporate new features in the future.

- Security and Privacy: Features include security measures to protect user data, especially for applications involving personal information.

- Accessibility and Usability: Features were designed with accessibility and usability in mind to ensure a user-friendly experience for all.

3.2 Requirements Specification

The systems primary focus should be on providing a user friendly easy to understand interface, which can be used easily and simple by anyone.

Functional Requirements:

➢ **System Feature**

This section gives a functional requirement that applicable to the online Quiz.

There are two modules in this phase:

Student/user module.

Admin module.

Functionality of each module are:

• **Student/user module:**

The student/user have to login in application. They can choose any of the given Quiz. Then

the student/user will get result immediately after the completion of test.

• **Admin module**:

The admin can see all the tables in the Database and can add the Question by selecting the particular topic.

Non Functional Requirements

Performance Requirements

• **Response Time**

The system shall give responses in 2 sec after user login.

• **Safety Requirements**

All logged information, updates, user activities are securely stored.

• **Security Requirement**

Any modification for the Database shall be synchronized and done by system admin.

3.4 Software and Hardware Requirements:

➢ **Software Requirements:**

S.No	NAME	SOFTWARE
1.	Platform	Windows 7 or above
2.	Language Used	Java+Swing
3.	Database tool	MySQL

➢ **Hardware Requirements:**

S.No	NAME	HARDWARE
1.	Processor	Intel dual core(32 bit)
2.	RAM	2GB
3.	Processor speed	2GHz

➢ **Product Preliminary Description:**

Product Perspective:

The Quiz Application is an educational platform built for those students and professionals who have interest in Government exams and gaining knowledge. The admin of our application can keep all the Quizzes updated all the time so that members get updated information. Here, various Quizzes will be available with different topics and description. Users can provide their valuable feedback and even contact us if there is any issue. The main users are : Admin (who can add, update or remove any Quiz and information)and Members (who are here to study).

➢ **Waterfall Process model**

The Classical Life Cycle or waterfall Process Model was the first process model to present a sequential framework, describing basic stages that are mandatory for a successful software development model. It formed the basis for most software development standards and consists of the following phases: Requirement analysis, design, coding, testing, and maintenance.

Advantages of waterfall model:

- Simple goal.

- Simple to understand and use.

- Clearly defined stages.

- Easy to arrange tasks.

- Process and result are well documented.

- Customers / end users already know about it.

- Easy to manage.

Disadvantage of Waterfall model:

- Rigid design and inflexible procedure.

- Waterfall model faced "Inflexible point solution" which meant even small amendments in the design were difficult to incorporate later design phase.

- As the requirement were froze before moving to the design phase, using the incomplete set of requirement, a complete design was worked amendments In case of a large project, completing a phase and then moving back to reconstruct the same phase, incurred a large overhead.

- Once a phase is done, it is not repeated again that is movement in the waterfall goes one to the next and the vice versa is not supported, deadlines are difficult to meet I case of large projects.
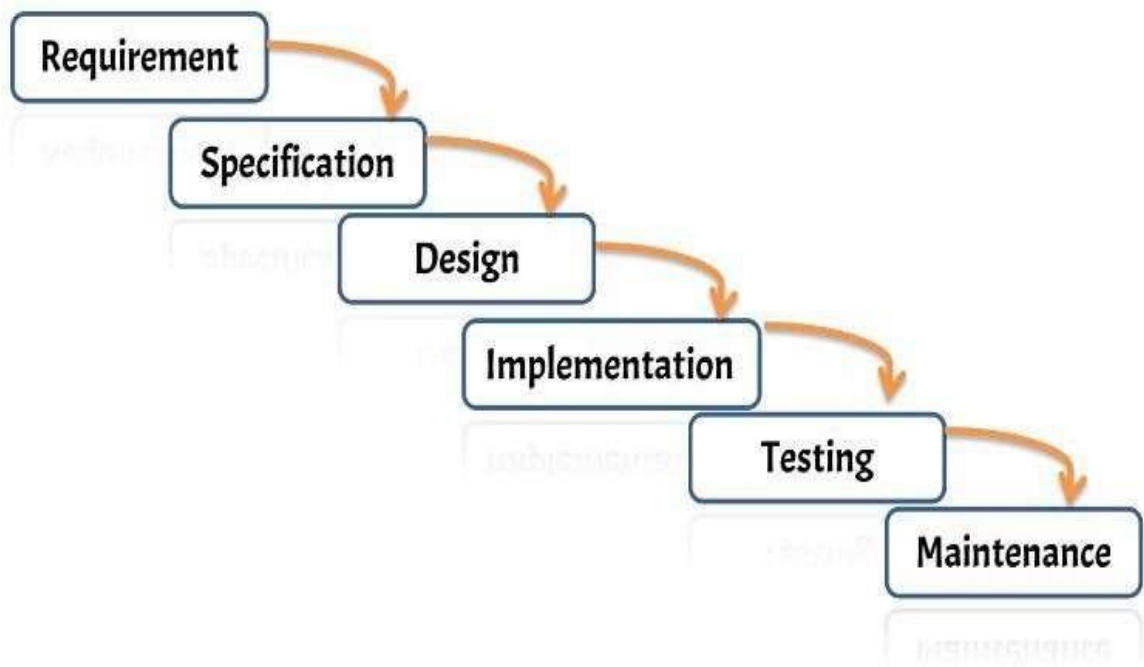
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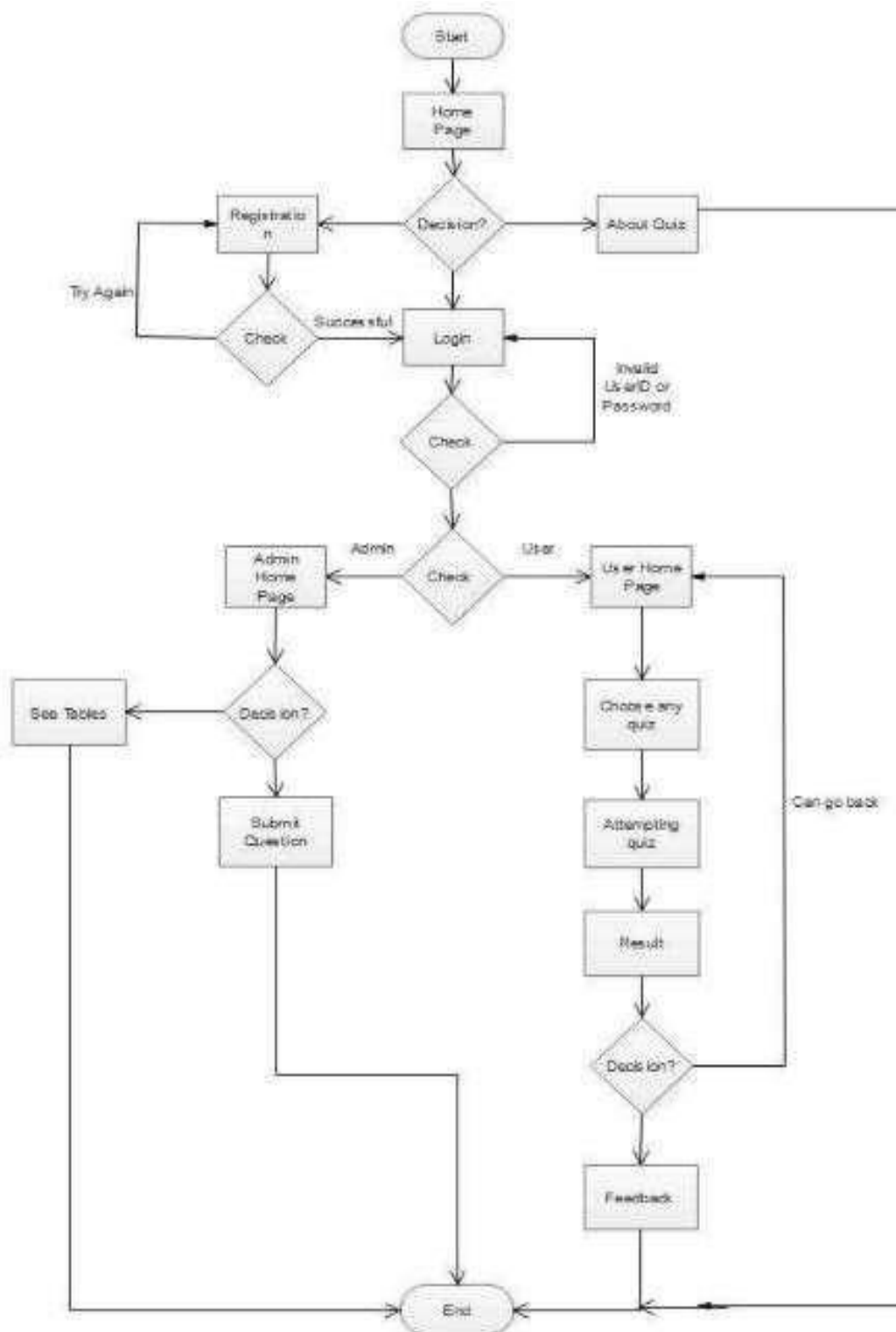
Flow Chart

RESULTS ANALYSIS AND VALIDATION

4.1. Implementation of solution

This is the phase in the software life cycle where the actual software is implemented. The result of this phase consists of source code, together with documentation to make the code reliable. Implementation is the action that must follow any preliminary in order for something to actually happen. It encompasses all the processes involved in getting new software and hardware operating properly in its environment, including installation, configuration, running, testing and making necessary changes.

In implementation we start with the actual execution of the software application with the design we have made. Implementation is done before we start with the coding of the software product Implementation includes writing codes with the design in hand. Implementation is the process of having systems personnel check out and put new equipment into use, train users, install the new application depending on the size of the organization that will be involved in

CONCLUSION AND FUTURE WORK

3.1. Conclusion

Quiz application provides facility to attempt quiz anywhere and anytime. It save time since user does need to wait for result. So student/user cannot wait for the result. All Student/ user get extra knowledge and skills. Administrator has a privilege to put as much as question in given Quiz in application. User can register, log-in to attempt Quiz. If user forget their password then he/ she can reset password with the help of Forgot Password option. There is instruction page for students get information about quiz like number of question, given time etc. After that student get the result of quiz. so, student cannot wait for result. also admin is responsible to add, delete and update question in the system. Also he can view result of all students. It has been a great pleasure for me to work on this exciting and challenging project. This project proved good for me as it provided practical knowledge of programming in JAVA and MYSQL server and also about all handling procedure related with Quiz System. It also provides knowledge about the latest technology used in developing application and server technology tha will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently. This Quiz Application can be efficiently used by any students and Educational platforms. During the course of this assignment I have gone through many obstacle which made me to research and also increase mu knowledge.

At last it can be concluded that the "Quiz Application" was the real learning experience.

The project has been made as per as the given specification. The sytem has been made as user friendly as possible.

5.2 Significance of the system

- The system is easy to use as it is user friendly.
- The working of the system is in organized form.
- It provides faster and accurate prescription processing.
- The system is kept simple and can be easily used by users.
- Quiz can be given without an instructor, which saves money and time.
- A larger number of participants, with instant results of your quiz.

5.3 Limitations of the System

- The admin needs to be regularly be in contact with other users for any update in the user's information.
- We want to implement a concept where user itself can add question for others.
- We want to implement a concept where the user can solve any query related to each question at that time only.
- We also want to implement a concept where every user can see profile of other user.

5.4 Future work

- The Scope of this project is very broad in terms of gaining knowledge and sharing knowledge among world.
- Can be used anywhere any time as it is a application.
- This application will be used in educational institutions as well as in corporate world.

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