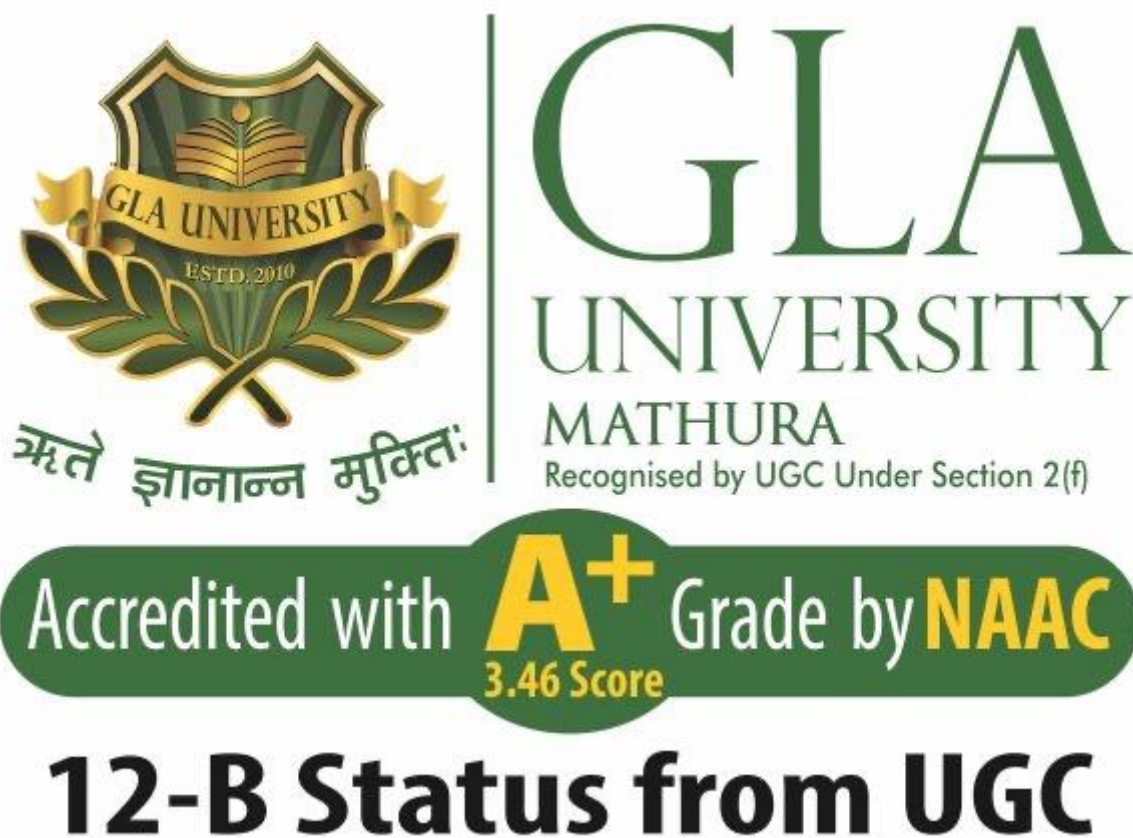# MINI PROJECT - II

(2023-24)

"CHATBOT"

Project Report

Institute of Engineering & Technology

Submitted By -

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<u>Declaration</u>

I/we hereby declare that the work which is being presented in the Bachelor of technology. Project **"CHATBOT" , Website"**, in partial fulfillment of the requirements for the award of the

Bachelor of Technology in Computer Science and Engineering and submitted to the Department of Computer Engineering and Applications of GLA University, Mathura, is an authentic record of my/our own work carried under the supervision of **Mr.**

Vikas kumar, Technical Trainer, Dept. of CEA,GLA University.

The contents of this project report, in full or in parts, have not been submitted to any other Institute or University for the award of any degree.

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ABSTRACT

Chatbots are poised to revolutionize User Interface design. Here's a quick summary of what chatbots are all about.

Technology

Chatbots, or conversational interfaces as they are also known, present a new way for individuals to interact with computer systems. Traditionally, to get a question answered by a software program involved using a search engine, or filling out a form. A chatbot allows a user to simply ask questions in the same manner that they would address a human. The most well known chatbots currently are voice chatbots: Alexa and Siri.

However, chatbots are currently being adopted at a high rate on computer chat platforms.

The technology at the core of the rise of the chatbot is natural language processing ("NLP"). Recent advances in machine learning have greatly improved the accuracy and effectiveness of natural language processing, making chatbots a viable option for many organizations. This improvement in NLP is firing a great deal of additional research which should lead to continued improvement in the effectiveness of chatbots in the years to come.

A simple chatbot can be created by loading an FAQ (frequently asked questions) into chatbot software. The functionality of the chatbot can be improved by integrating it into the organization's enterprise software, allowing more personal questions to be answered, like"What is my balance?", or "What is the status of my order?".

Most commercial chatbots are dependent on platforms created by the technology giants for their natural language processing. These include Amazon Lex, Microsoft Cognitive Services, Google Cloud Natural Language API, Facebook DeepText, and IBM Watson. Platforms where chatbots are deployed include Facebook Messenger, Skype, and Slack, among many others.

Applications

A chatbot can be used anywhere a human is interacting with a computer system. These are the areas where the fastest adoption is occurring:

Customer Service — A chatbot can be used as an "assistant" to a live agent, increasing the agent's efficiency. When trained, they can also provide service when the call centre is closed, or eventually even act as an independent agent, if desired.

Sales/Marketing/Branding — Chatbots can be used for sales qualification, ecommerce, promotional campaigns, or as a branding vehicle.

Human Resources — An HR chatbot can help with frequently asked questions ("how many vacation days do I have left?") and can act as an onboarding assistant.

Benefits

· Economically offer 24/7 Service

· Improve Customer Satisfaction

· Reach a Younger Demographic

· Reduce Costs

· Increase Revenue

Chatbots

Bots

AI

Artificial Intelligence

UX Design

CONTENTS

LIST OF FIGURES

CHAPTER -1
INTRODUCTION

1.1 CONTEXT

This Web Application "CHATBOT" has been submitted in partial fulfilment of the requirements for the award of the degree of Bachelor of Technology in Computer

Science and Engineering at GLA University, Mathura supervised by Mr. vikas kumar This project has been completed approximately three months and has been executed in modules, meetings have been organised to check the progress of the work and for instructions and guidelines.

1.2 MOTIVATION

Now-a-days, Getting placed is the topmost priority for each and every student. For this, Every student hustle day and night .In order to make their preparation lenient, easy and quick, a placement oriented application should be there. These types of applications will help students to prepare at the last minute in a very systematic way. On top of that, these should also contain explanations of the topics covered in semester examinations in a crystal clear manner.

After seeing lots of platforms and applications of preparations we realize that students need a single user friendly place where they can find all the important questions regarding their placement. By solving these questions and concepts students will be able to clear their placement rounds.

1.3 OBJECTIVE

The main objective of this application is to create a Placement Preparation app named

"**chatbot**" which will have a lot of questions and which have come in the last five years .

This application can be used at a variety of places, at education hubs and have its significance. The goal of the website was to provide a way to the learners and users to get all the important questions that came to companies in the last five years at a particular location.

CHAPTER -2

SOFTWARE REQUIREMENT ANALYSIS

2.1 Placement Preparation-A Herculean Task

Books are considered as the best friends of students in a real sense, and it is said that they are also the best companions of students. But the students need a straight quick efficient path for their side by side preparation and for this, chatbot will also help the students at the time of study where they need to prepare for only those questions which are important for them .

Our web application "chatbot" will also help students in the same manner as it contains all the previous last five year questions.

It has a user-friendly layout that will help students to switch between functionalities very easily so students will easily understand.

2.2 PROBLEM STATEMENT

It is being hard for students to prepare for study along with day to day college life. They have lectures, assignments, projects ..For this, we have build this web application by which the students become able to complete their preparations in mean and less time.

Considering current scenario of the students, this application will help them to make their preparation sound and strong for the study. As we have discussed earlier, it contains various fields of Books, Hand Written Notes, Video lecture etc where they possess previous year question papers in multiple choice manner, due to which it became user friendly because of the same. It will also help students in study. On the top of that, our web application, chatbot,

will help students in the same manner as it contains all the previous year questions that has been asked by the in GLA for five year in a row.

2.3 HARDWARE AND SOFTWARE REQUIREMENTS

Hardware Requirement

• Processor: Min. Core i3

• Operating System: Windows 7/8/10/XP

• RAM: Min. 1GB

• Hardware Devices: Laptop/PC/Mobile

• Hard Disk: 256GB

• Display: Min. 720p

Software Requirement

● Technology Implemented: TAILWIND CSS, BOOTSTRAP CSS

● Language Used: HTML, CSS, JAVASCRIPT, PHP

● Database: FIREBASE

● User Interface Design: FIGMA

● Web Browser: Chrome, Edge, Firefox

2.3 MODULES AND FUNCTIONALITIES

Login Page: This page is for those users who have already registered themselves on the website and have a username and a password. There is also a way on this page for the new users to register themselves which will take them to the registration page.

Sign up Page: This page is solely designed for the new users of the website who are willing to register themselves. This page takes input of the various details of the user and stores it in the database, later helping the user to login into the account withcredentials they have provided.

Forget Password Page: This page comes into picture when one of the users forgets the login credentials. In this case this page asks for the email-id with which the user has already registered. The app will check if there is any entry in its database with the id and if there a mail will be sent to the same id for recovering the credentials and notification will be given to the user.

Dashboard Page: This is the page displayed for every user after entering the website successfully. It contains the user photo and also there are five

subject buttons representing five types of question sections of soft skills from which the user will attempt the questions .

Quiz Page: This is the page displayed for every user after clicking on Subject -buttons.

It contains previous year questions of respective subjects .

Update Profile: This page will update the user details that the user entered while creating the account on the website. The user can update and make changes to all this information as desired.

Menu: This page will show all the details which have to contain in the menu

Logout page: Then is this last panel for the users to sign out from the account. As soon as the users sign out they are brought back to the login page

Key Points :-

1. Online Preparation is an online technology that allows users(students) to prepare for

   the study.

2. Chatbot contains previous year questions that have been asked by the

    GLA for five year in a row.
3. It is based on HTML, CSS, JAVASCRIPT technology along with front-end, Firebase,

   Github etc.

4. It is basically a last-minute oriented application where students can prepare for the

   drives in no time.

5. It has user friendly layout that will help students to switch between functionalities very

   easily

CHAPTER -3 TECHNOLOGY USED

3.1 HTML :- HTML or Hyper Text Markup Language is the main mark up language for creating web pages and other information that can be displayed in a web browser.HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like<html>), within the web page content. HTML tags most commonly come in pairs like <h1> and

</h1>,although some tags represent empty elements and so are unpaired, for example<img>.The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags web designers can add text, further tags, comments and other types of text-based content. The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behaviour of HTML web pages.

CSS:- Cascading Style Sheets(CSS) is a style sheet language used for describing the look and

formatting of a document written in a markup language. While most often used to style web

pages and interfaces written in HTML and XHTML, the language can be applied to any kind of

XML document, including plain XML, SVG and XUL. CSS is a cornerstone specification of the web
and almost all web pages use CSS style sheets to describe their presentation.CSS is designed
primarily to enable the separation of document content from document presentation, including
elements such as the layout, colors, and fonts. This separation can improve content accessibility,
provide more flexibility and control in the specification.

3.2 JAVASCRIPT:- JavaScript(JS) is a dynamic computer programming language. It is most

commonly used as part of web browsers, whose implementations allow client side scripts to

interact with the user, control the browser, communicate asynchronously, and alter the

document content that is displayed. It is also being used in server-side programming, game

development and the creation of desktop and mobile applications. JavaScript is a

prototypebased scripting language with dynamic typing and has first-class functions. Its syntax

was influenced by C. JavaScript copies many names and naming conventions from Java, but

the two languages are otherwise unrelated and have very different semantics. The key design

principles within JavaScript are taken from the Self and Scheme programming languages. It is a

metaparadigm language, supporting object-oriented, imperative, and functional programming

styles.

3.3 BOOTSTRAP:- Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScriptbased design templates for typography, forms, buttons, navigation, and other interface components.

3.4 FIREBASE:- Firebase is a Backend-as-a-Service (Baas). It provides developers with a variety of tools and services to help them develop quality apps, grow their user base, and earn profit. It is built on Google's infrastructure.

Firebase is categorized as a NoSQL database program, which stores data in JSON-like documents.

Key Features

1. Authentication

It supports authentication using passwords, phone numbers, Google, Facebook, Twitter, and more. The Firebase Authentication (SDK) can be used to manually integrate one or more sign-in methods into an app.

2. Realtime database

Data is synced across all clients in realtime and remains available even when an app goes offline.

3. Hosting

Firebase Hosting provides fast hosting for a web app; content is cached into content delivery networks worldwide.

4. Test lab

The application is tested on virtual and physical devices located in Google's data centers.

5. Notifications

Notifications can be sent with firebase with no additional coding.

Users can get started with firebase for free; more details can be found on the official website.

CHAPTER -4

IMPLEMENTATION AND USER INTERFACE

Reating an website concept design with screen sketches and functional flow diagrams is the best way to communicate your vision to the website developer.

Making the concept clear to the developer is probably the most important factor in successful website development. Yet it is one of the most common problems or obstacles in a website development outsourcing project.

No matter what the marketing and profit goals are or if you are outsourcing an website for your personal use, you need to fully design and document the website concept if you expect a programmer to make your vision a reality. Developers are not mind readers and even descriptions given during conversations can be very fleeting or interpreted differently. Fully documenting your concept, therefore, leaves little to chance. The two most important things to do are:

A) make a comprehensive description of how the website works and what it does (functionality) and

B) create a comprehensive description of what the user sees and does (look and feel).

4.1 Implementation of the chatbot:

Implementation of chatbot is taking place in various phases. Firstly we build the Menulayout ,Dashboard , Profile and other screens

Step to be followed to develop the website:

1. Firstly we create login phase which comprises of various phases that are mentioned below:

- Login Page: allows user to login into the website if the user is existing one

- Register Page: If the user is new to our website then firstly he/she has to register themselves on the website.

- OTP Page: After the SignUp page,it shows up for the clarification of data.

- **For authenticating the user we have used firebase authentication**.

2. Now, we are going to create a Menu for update profile,progress report,About us,FAQ,Signout/logout etc.

3. Our Main item is Dashboard. In this, We will have five buttons as Books, Hand Written Notes, Quizzes, Sticky Notes, Lecture .

4. After completing the particular quizzes the result will be shown at the screen and hence progress report.

   4.1.1 Step to be followed by the user
   - Firstly, we have the Login activity which consists of following steps

   - Register : for new User

   - Login: For existing as well as new user

   - We authenticate and store the user information from the Firebase authentication.

- After that, we made a layout of our chatbot website which includes various functionality

- Profile Fragment: To check the profile and update the database.

- Dashboard Fragment: Show the book on the genre basis and it is open by default.

- About website : Information about the website.

- FAQ: Where user can drop its queries and suggestions regarding application.

- Sign-out Fragment: Remove/logout you from the website.

- In the Dashboard fragment we have five options or buttons that can be chosen by the user to select the type of questions he wants to go through.

CHAPTER-5

CONCLUSION

Chatbot is an application which is designed for the preparation of the study. Basically, It is an application where users can find all important and mandatory topics related to study.

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REFERENCES

1. **HTML:** **https://www.w3schools.com/TAGS/default**

2. **CSS: https://www.w3schools.com/cssref/**
3. **JAVASCICPT: https://www.w3schools.com/JSREF/DEFAULT.ASP**