

PROFESSIONAL TRAINING - 2 REPORT
at
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
(Deemed to be University)

Submitted in partial fulfillment of the requirements for the award of

Bachelor of Engineering degree in

Information technology

by

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2. SCHOOL OF COMPUTING

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited with Grade “A” by NAAC
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JANUARY- 2021



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SCHOOL OF COMPUTING

BONAFIDE CERTIFICATE

This is to certify that this Professional Training - 2 Report is the bonafide work of **MOHAMED MUDASSIR S(Reg.No.37120045)** who underwent the professional training in “**STUDENT ENQUIRY PORTAL**” under our supervision from august 2021 to september 2021.

Internal Guide

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Internal Examiner

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DECLARATION

I **MOHAMED MUDASSIR S (Reg. No. 37120045)** hereby declare that the Professional Training - 2 Report on “**WEB APPLICATION**” done by me under the guidance of **Dr. R.SUBHASHINI M.E., Ph.D.**, at Sathyabama Institute of Science and Technology is submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering degree in information technology

DATE:

PLACE:

SIGNATURE OF THE CANDIDATE

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ABSTRACT

The student enquiry portal helps to maintain the student enquiry by linking it with the student ERP. Chatbot is included to represent a realtime online conversation. FAQ's are included to the home for the most frequently asked questions.

Student enquiry portal website is developed on HTML , CSS and the chatbot is created on python. The main objective of creating the student enquiry portal is to help the students to interact with the chatbot and clarify their queries

Chatbot will respond to all the queries of the student. It will be available on the student ERP 24x7 so students can enquire whenever they want. If the student asks a query which is pre stored, it will respond with the related answer. If not it will respond with a invalid context answer.

The Chatbot will answer the FAQ's based on the queries that are already stored in the ERP system in a YAML file. Each time when the students ask questions, the chatbot will respond to it as per the related queries that are already stored in the YAML file.

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1.INTRODUCTION

1.1 STUDENT ENQUIRY PORTAL

WebDesigning

Hypertext Markup Language (HTML) is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML.^[1] CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.^[2]

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts.^[3] This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

Chatbot

A **chatbot** is a piece of software that conducts a conversation via auditory or textual methods. Such programs are often designed to convincingly simulate how a human would behave as a conversational partner, although as of 2019, they are far short of being able to pass the Turing test. Chat bots are typically used in dialog systems for various practical purposes including customer service or information acquisition. Some chat bots use sophisticated natural language processing systems, but many simpler ones scan for keywords within the input, then pull a reply with the most matching keywords, or the most similar wording pattern, from a database.

The term "Chatter Bot" was originally coined by Michael Mauldin (creator of the first Verbot, Julia) in 1994 to describe these conversational programs. Today, most chat bots are accessed via virtual assistants such as Google Assistant and Amazon Alexa, via messaging apps such as Facebook Messenger or WeChat, or via individual organizations' apps and websites. Chatbots can be classified into usage categories such as conversational commerce (e-commerce via chat), analytic, communication, customer support, design, developer tools, education, entertainment, finance, food, games, health, HR, marketing, news, personal, productivity, shopping, social, sports, travel and utilities

1.2 SCOPE

The main objective of our project is to bring the need for student enquiry online and enable all the students to clarify their queries without having to approach the enquiry staff.

The various requirements are basic knowledge in html,css and python. The chat-bot enables students to have their queries clarified online in real time , an efficient way to save time and have a interactive session with our chat-bot which is named as Stu-bot for this project.

So, the stakeholders are students, faculties, dean and admin. All the stakeholders are given access accordingly. In this case the students can only give their credentials and clarify their queries. While, the Admin has access to the entire database checking, managing and answering the queries.

The limitations of the portal applies for both the modules. In the realtime module , the Stu-bot cannot answer irrelevant queries and queries which are not updated in the database. In the query storage module the no. of query stored has a certain limitations. Storing more can lead to congestion and confusion of database in storing and managing queries.

2. LITERATURE SURVEY

A study was carried out by Yehia .M. helmy and others [1] to create an web portal to satisfy need for a web portal that has been increased in order to support decision making in the different organizational levels at internet time by providing features such as, customization, personalization, support for collaboration and notification that support managers in making the right decision at internet time. All this can be achieved by applying the (BI) tools on “Oneversion” data store that contains data from legacy ERP system after applying the ETL tools over it. Also the Data marts will be used in order to shorten the response time of queries generated by the user.

Avinash Gutte and others [2] have carried out an exhaustive survey in this project of the ERP systems way from the manufacturing sector are entering rapidly into universities and colleges. ERP now is experiencing the transformation that will make it highly integrated, more intelligent, collaborative, and web-enabled. Reason for choosing ERP for education are accessing information from paper files is difficult task, lack of means to access old records, wastage of hundreds of hours by staff each month manually entering information or performing task that could be handled automatically like evaluation & generating results. E-college will solve these lacunas and help educational institutes to save their valuable time. This paper provides a limited set of modules and their implementation which are required by educational institutes to function smoothly

Vivek Anand [3] and others carried out an analysis on College ERP system provides a simple interface for maintenance of different student, department, faculties, library and others information. All the colleges

usually have a number of departments and educational modules such as courses, seminar hall, etc. Managing all these departments and other modules manually is a very difficult and hard, ineffective and expensive task. So here we propose an ERP system for college. college ERP system has all the information about the students, teachers, events, library, departments and other respected information. The system allows the admin to add students, faculties and any other events. Our system allows a faculty to enter or input student's attendance into the database which can later be viewed by students and faculties. The students can view his/her attendance through a separate student login. The admin can upload the timetables for various departments for exam preparation. The time table is then available to be viewed by faculties and students on the web portal. These systems have easy user interface and have powerful data management system which makes this system is very useful.

GHEORGHE SABAU and others [4], demonstrated A Higher Education ERP system can be used as a solution to integrate and increase the efficiency of the Romanian university processes. This paper examines the application of ERP software in Romanian Universities. We made an SWOT analysis for implementing an ERP system in Romanian Universities. Also,

we proposed a comparison framework of ERP solutions for higher education management using as starting point the requirements of a Romanian University. The framework was applied to four of the top Higher Education management solutions. The process of evaluating an ERP system for use in higher education requires that a university compare the existing ERP software available to their current processes and see which ERP solution will best fit the existing procedures.

Fabio Clarizia and others [5] designed an prototype of a Chatbot in educational domain: the purpose has focused on the design of the specific architecture, model to manage communication and furnish the right answers to the student. For this aim, it has been realized a system that can detect the questions and thanks to the use of natural language processing techniques and the ontologies of domain, gives the answers to student. Finally, after the implementation of the designed model, experimental campaign was conducted in order to demonstrate its utility.

2.1 Existing System

The Existing ERP model have login ,course registration and attendance but it doesn't have any query answering module in real time. In order to overcome this drawback we have included the chat bot module. Presently the queries of the students are asked either by calling the institution or approaching directly to the institution. By adding this chatbot feature to the institution's ERP student's can use it 24x7 to clarify their queries.

2.2 Objectives

- To bring the student enquiry online.
- To help the students clarify their queries through chatbot.
- Saves time.
- User friendly

3.SYSTEM REQUIREMENTS

3.1 HARDWARE REQUIREMENTS

- Processor : core i5 or i7
- RAM : 4 GB
- Memory : 2 GB of available disk space
- Input device : Standard Keyboard and Mouse
- Output device : VGA and required Resolution monitor
- Resolution : 1280 x 800 minimum screen resolution

3.2 SOFTWARE REQUIREMENTS

- Operating System : windows 8/10(64-bit)
- Python : version 3.6.8
- IDLE : version 3.6(64 Bit)

4. SYSTEM DESIGN

4.1 ARCHITECTURE DIAGRAM

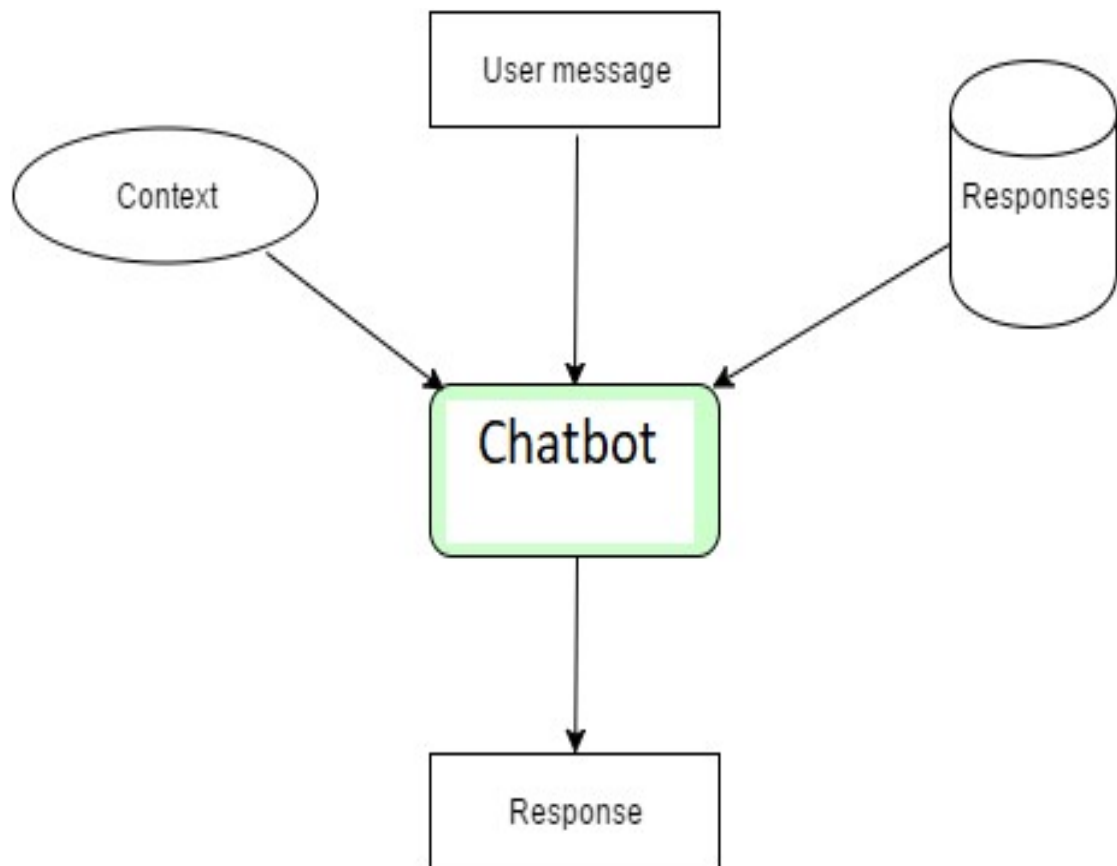


Figure 4.1.1

4.2 USE CASE DIAGRAM

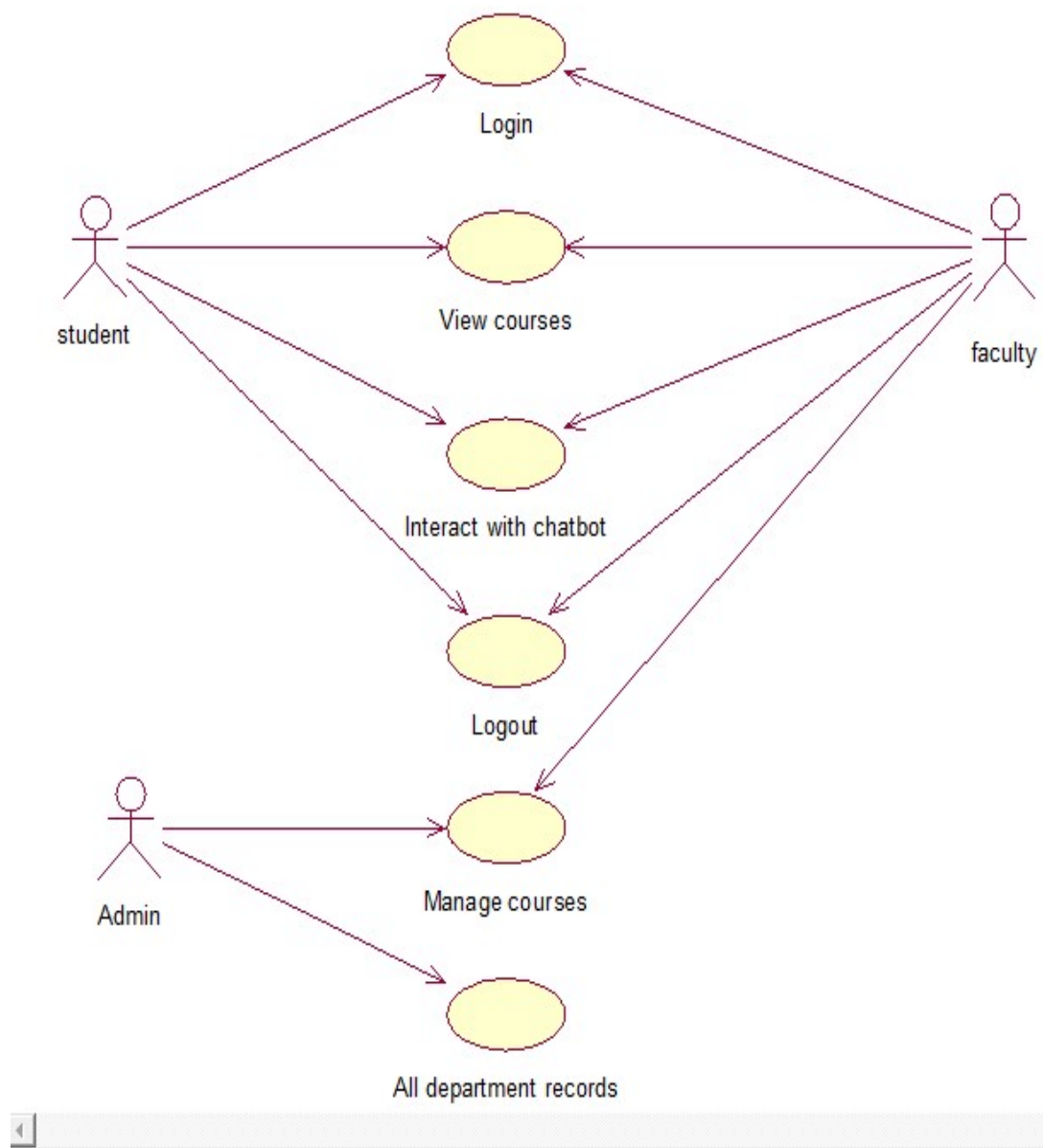


Figure 4.2.1

5. CONCLUSION AND FUTURE WORK

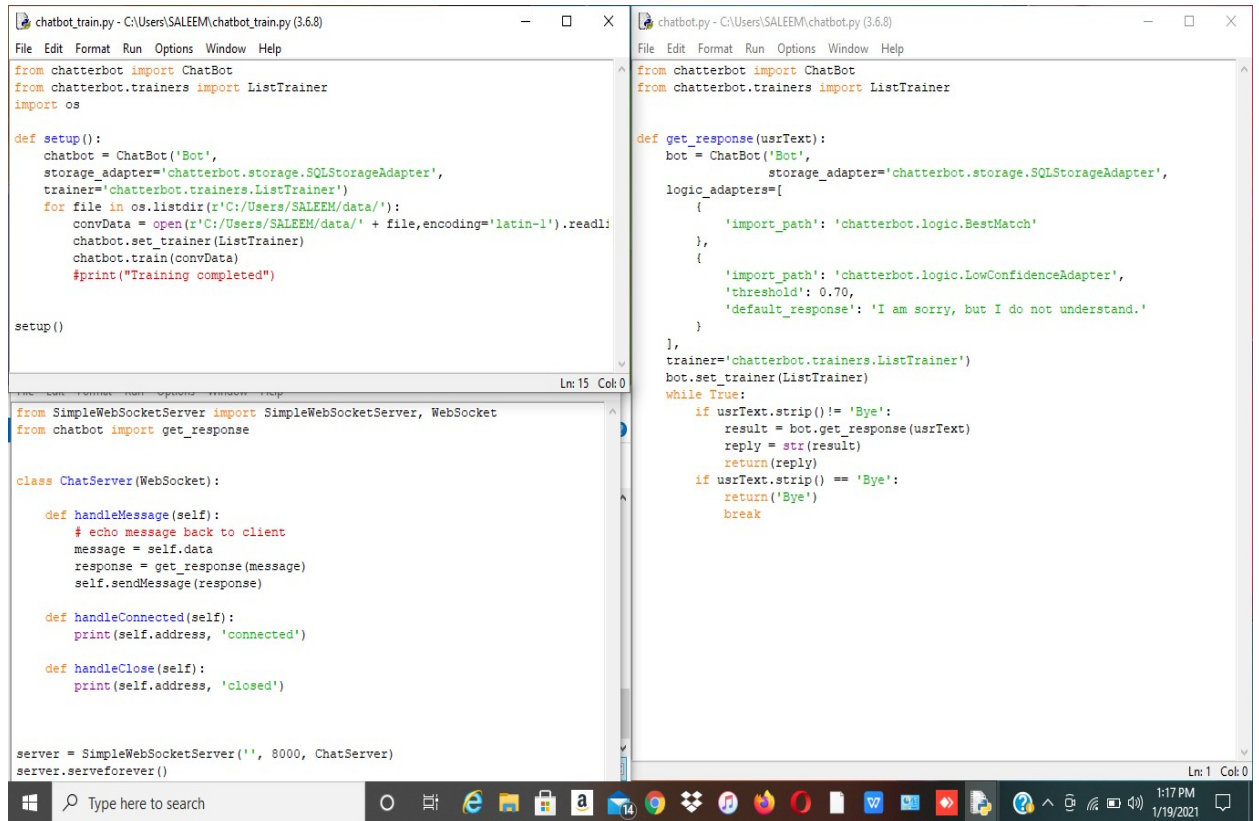
This Student enquiry portal not only has the features of ERP system but it also has a modern chat-bot as its additional feature. Using this chat-bot the students can enquire all their institution related queries through it. Thus enabling the ERP system as a user friendly environment for students.

Since this chat-bot does not have the feature to store the queries, In future scope, the chat-bot will be linked to a database, where unanswered queries will be stored and replied to the user through mail. The user can ask any type of queries, it will be answered either by a mail or through the chat-bot.

REFERENCES

1. Yehia M. Helmy, Managment Information System Department, Faculty of Commerce & Business administration, Helwan University
Advanced Computing: An International Journal (ACIJ), Vol.3, No.5, September 2012
2. Avinash Gutte, Nikhil Kate, Ajayraj Hulikere, "E-College: An ERP for Educational Institute", International Journal of Computer Science and Engineering , Volume-2, Issue-3,
3. Vivek Anand, Adarsh Poojary, Rafiur Mondal. "ERP System for College", International Journal of Computer Science Trends and Technology (IJCST) – Volume 5 Issue 2, Mar – Apr 2017
4. Fabio Clarizia, Francesco Colace, Marco Lombardi, Francesco Pascale, Domenico Santaniello. "Chatbot: An Education Support System for Student". DIIn University of Salerno Fisciano, Italy.
5. Gheorghe Sabau, Mihaela Munten, Ana-Ramona Bologa, Razvan Bologa, "An Evaluation Framework for Higher Education ERP Systems". Department of Informatics in Economy, Faculty of Economic Cybernetics, Statistics and Informatics, Academy of Economic Studies, Bucharest, P-ta. Romana 6

SOURCE CODE



```
chatbot_train.py - C:\Users\SALEEM\chatbot_train.py (3.6.8)
File Edit Format Run Options Window Help

from chatterbot import ChatBot
from chatterbot.trainers import ListTrainer
import os

def setup():
    chatbot = ChatBot('Bot',
        storage_adapter='chatterbot.storage.SQLStorageAdapter',
        trainer='chatterbot.trainers.ListTrainer')
    for file in os.listdir(r'C:/Users/SALEEM/data/'):
        convData = open(r'C:/Users/SALEEM/data/' + file, encoding='latin-1').readl
        chatbot.set_trainer(ListTrainer)
        chatbot.train(convData)
        #print("Training completed")

setup()

Ln: 15 Col: 0

from SimpleWebSocketServer import SimpleWebSocketServer, WebSocket
from chatbot import get_response

class ChatServer(WebSocket):

    def handleMessage(self):
        # echo message back to client
        message = self.data
        response = get_response(message)
        self.sendMessage(response)

    def handleConnected(self):
        print(self.address, 'connected')

    def handleClose(self):
        print(self.address, 'closed')

server = SimpleWebSocketServer('', 8000, ChatServer)
server.serveforever()

chatbot.py - C:\Users\SALEEM\chatbot.py (3.6.8)
File Edit Format Run Options Window Help

from chatterbot import ChatBot
from chatterbot.trainers import ListTrainer

def get_response(usrText):
    bot = ChatBot('Bot',
        storage_adapter='chatterbot.storage.SQLStorageAdapter',
        logic_adapters=[
            {
                'import_path': 'chatterbot.logic.BestMatch'
            },
            {
                'import_path': 'chatterbot.logic.LowConfidenceAdapter',
                'threshold': 0.70,
                'default_response': 'I am sorry, but I do not understand.'
            }
        ],
        trainer='chatterbot.trainers.ListTrainer')
    bot.set_trainer(ListTrainer)
    while True:
        if usrText.strip() != 'Bye':
            result = bot.get_response(usrText)
            reply = str(result)
            return(reply)
        if usrText.strip() == 'Bye':
            return('Bye')
            break

Ln: 1 Col: 0
```

OUTPUT

