SMARTBRIDGE INTERNSHIP

INTERNSHIP TITLE

Intelligent Customer Help Desk with

Smart Document Understanding - SB28178

PROJECT TITLE

Intelligent Customer Help Desk with

Smart Document Understanding

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BATCH- 4

PROJECT ID- SPS_PRO_99

APPLICATION ID- SPS_APL_20200001440

CONTENT

ABSTRACT

End users turn to help desks in order to resolve issues they may experience with the organization's product, service, or system. As such, help desk support staff are tasked with answering questions and providing on-site help to users experiencing a problem. In this project we will design a customer care chatbot in which we will provide relevant sections of the owner’s manual to help solve our customers’ problems instead of “Would you like to speak to a customer representative?”.

INTRODUCTION

In this project we are going to develop a chatbot that uses various Watson AI Services such as Watson Discovery, Watson Assistant, Watson Cloud Functions and Node-Red to design a web-based UI through which we can communicate with the assistant. The project shall use the Smart Document Understanding feature of Watson Discovery to train bot. This project will help to return the answers of queries. IBM Cloud Functions web action is created that allows Watson Assistant to post queries to Watson. Further Watson Discovery is integrated with Watson assistant using webhook. Finally using Node-Red, Watson assistant is integrated with a web UI. This UI can then be used to connect with Watson assistant and answer the customer queries.

REVIEW OF LITERATURE

2.1 LITERATURE

Existing Problem of a typical customer care chatbot is that it can answer simple questions, such as store locations and hours, directions, and maybe even making appointments but when a question falls outside of the scope of the pre-determined question set, the option is typically to tell the customer the question isn't valid or offer to speak to a real person. The solution to this is obtained by this project by creating a chatbot which will provide another option. If the customer question is about working of device, the answer will be searched with the help of Watson Discovery Services in which the device's owner's manual will be pre-loaded. So now, instead of "Would you like to speak to a customer representative?" we get a relevant section from the owner's manual to help solve our customers' problems.

2.2 ADVANTAGES

1 Less need of man power.

2 Less calls will be diverted to Customer representatives.

REQUIREMENT ANALYSIS

IBM CLOUD PLATFORM

The IBM cloud platform combines platform as a service (PaaS) with infrastructure as a service (IaaS) to provide an integrated experience.

IBM WATSON SERVICES

IBM Watson is a cognitive platform originally developed by IBM to answer questions.

3.1 FUNCTIONAL REQUIREMENT

IBM Cloud

3.2 TECHNICAL REQUIREMENT

AI

ML

Watson AI

Node JS

3.3 SOFTWARE REQUIREMENT

Watson Assistant

Watson Discovery

Watson Cloud Functions

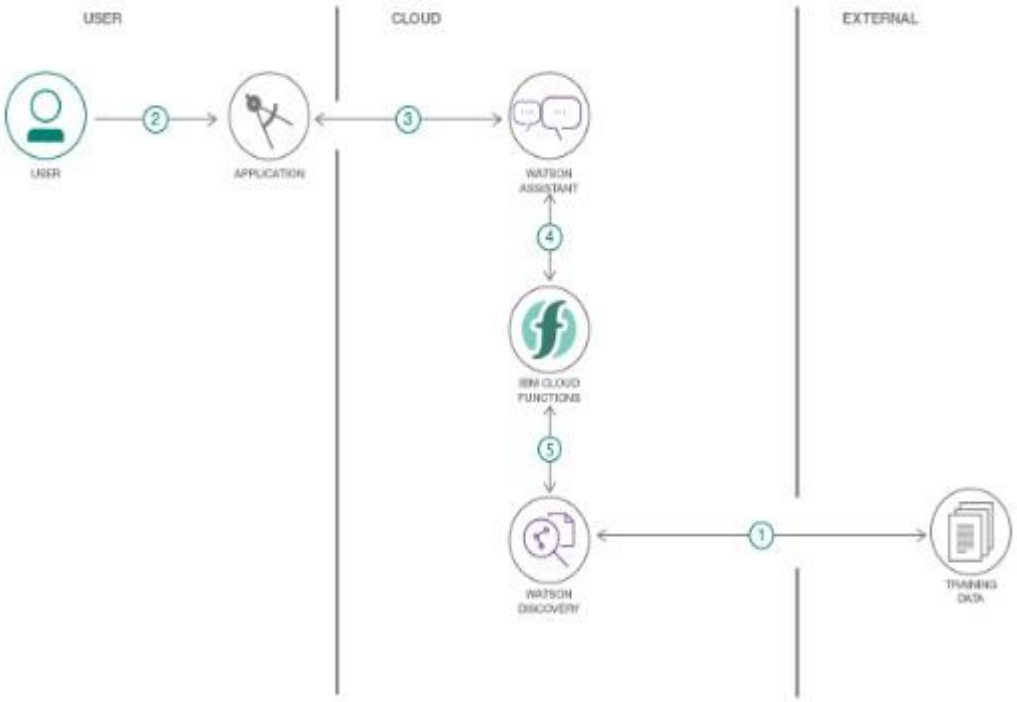
Node-RED Web Browser

SYSTEM DESIGN AND FLOW

4.1 DESIGNING

1. Create necessary Watson Services.
2. Configure Watson Discovery.
3. Create Watson Cloud Functions Action that allows Watson Assistant to post queries to Watson Discovery.
4. Configure Watson Assistant.
5. Integrate Watson Discovery with Watson Assistant using webhook.
6. Build Node-RED flow to integrate Watson Assistant and Web Dashboard.

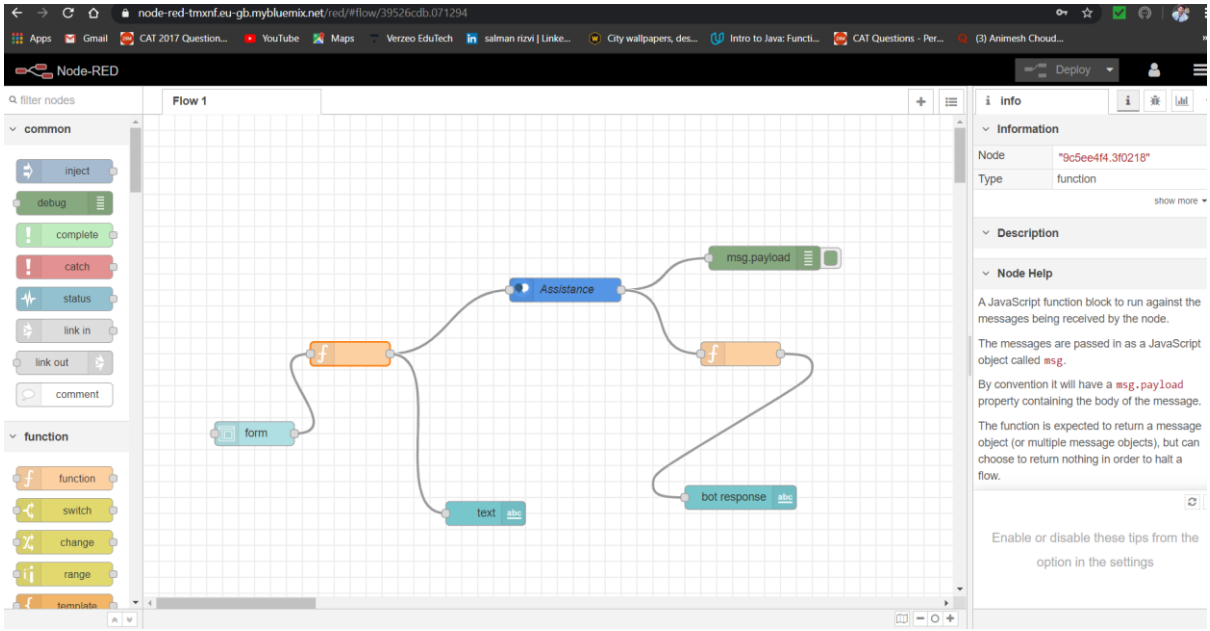
4.2 FLOW



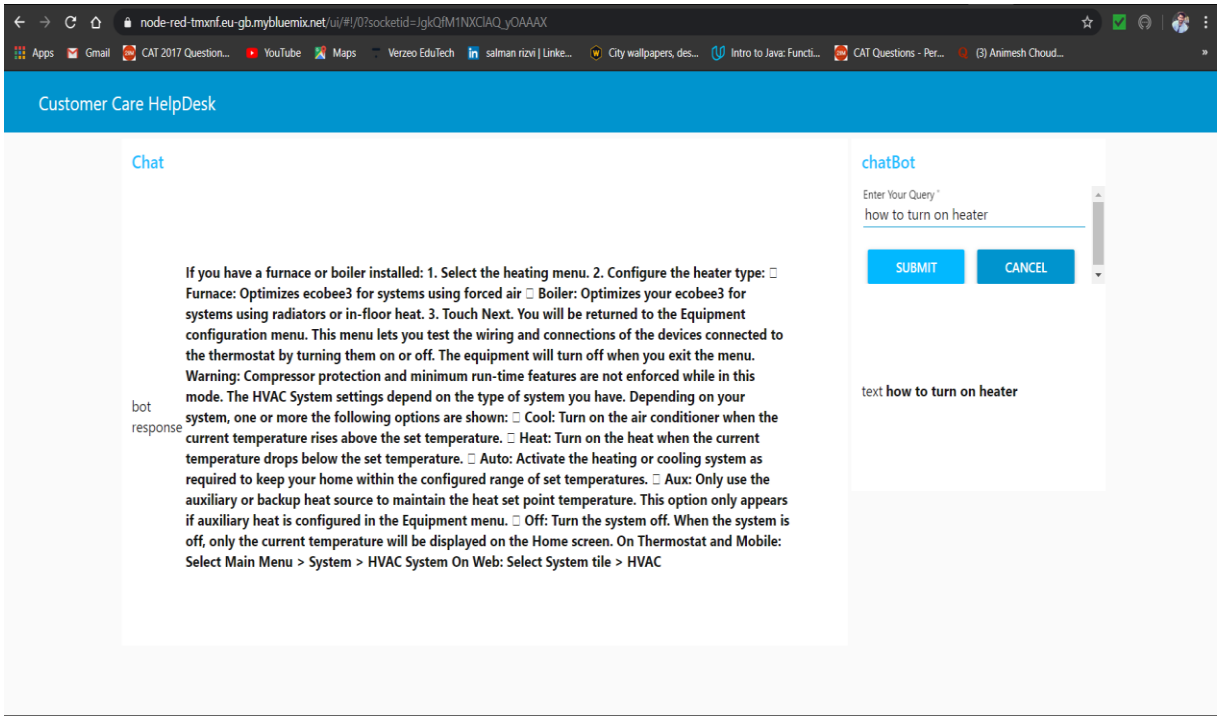
4.3 NODE – RED FLOW

Web based UI was developed by integrating all the services using Node-RED.

URL for UI Dashboard : https://node-red-tmxnf.eu-gb.mybluemix.net/ui/#!/0?socketid=JgkQfM1NXClAQ_yOAAAX



4.4 FINAL IMPLEMENTATION :



CONCLUSION AND FUTURE SCOPE

5.1 CONCLUSION

An Intelligent Customer Helpdesk Chatbot was created using various Watson services like Watson Discovery, Watson Assistant, Watson Cloud Functions and Node-RED

5.2 FUTURE SCOPE

In the future, we can use various other Watson services like Text-To-Speech and Speech-To- Text which can be integrated in the chatbot. This can make the chatbot Hands-free and reduce the need of human representative

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