

# Automated ChatBot Application for Blood Bank Management

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**Abstract:** This project aim is to develop an application system to automate the blood bank management system without human intervention. A Chatbot allows a user to simply ask questions in the same manner that they would address a human. In the emergency situation the patient's family can simply ping the bot instead of rushing for arranging the blood. The bot collects all the relevant information about the donor and acceptor. Whenever blood required for patients they need to ping the bot. Once the details are entered in the bot, it gives information about the donor. We use Uipath community edition to develop the bot application. We use the Google dialogflow for creating the conversation. We use chatbot.uipath.com to map the work done in Uipath Workflow and Google dialogflow.

**Key Words:** Donor, Acceptor, Blood, Chatbot, Reply, Userquestion.

## 1. INTRODUCTION

To create an application for blood bank can be beneficial for patients who are indeed of blood. The objective of developing a system is to reduce the situation of rushing for arranging the blood. In the emergency situation the patient's families can stay with the patient and easily arrange the blood instead of rushing for arranging the blood. Chatbot is a computer program designed to simulate conversation with human users, especially over the internet. This is the bot application so we just ping the message the bot. The bot will response soon. As well as need of arranging the blood with required details of the donor will be displayed. The data will be collected through the bot itself. The donor has to registered his/her details in the bot. The detailed are stored in the database. Once the patients ping the required details the related response will be displayed. We use two software such as uipath studio and google dialogflow.

## 2. EXISTING SYSTEM

It is a complicated process to get the blood in the emergency situation. The patient's families have to rushing for arranging the blood in the critical situation. It waste's a lot of time in visiting blood bank center if needed blood is not available. Consumes lot of man power to better results. The existing application system is very complex and also it consumes more time. Moreover, the existing system will provide the blood in the emergency situation through hospital. Hence the existing system will be unstable for user experience.

## 3. PROPOSED SYSTEM

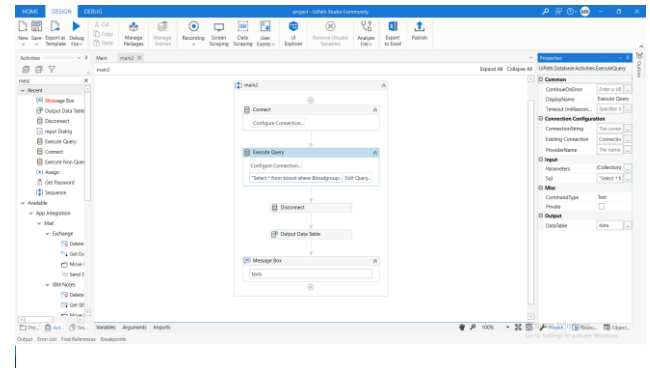
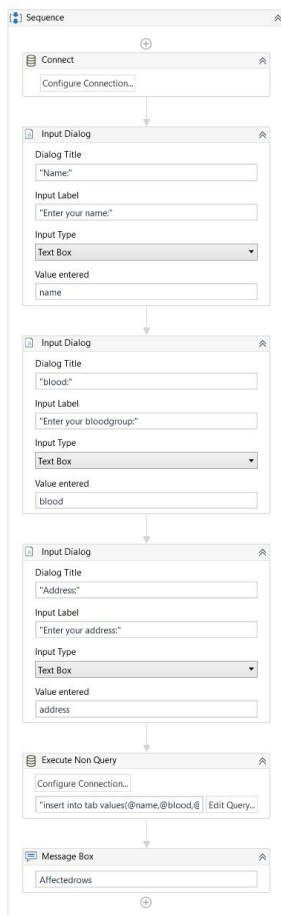
By using of this application people who want to donate their blood can registered in this application by providing their details. When you ping the bot it will display the donors list and their details. The user can communicate with bot easily. This application can help their donor families to stay with their patients.

## 4. IMPLEMENTATION

The main purpose of an automated blood bank system is to simplify the process of searching of blood in the emergency. A chatbot is a software and these simplifies the conversation through messaging applications, websites, etc. It is the most advanced technology it creates interaction between the humans and machines. It is a user friendly system. We include a part of Uipath and dialogflow for creating an application. Uipath studio is a automation tool it used to create the automation process. Uipath Orchestrator is a web-based application. It helps you to manage the robotic process. We use google dialogflow to manage the conversation in the chatbot.

The donors have to register their details in the bot and their details are stored in the database. Once the patient needs the blood he/she needs to ping the bot. They have to give the details about the blood group required and their place. Once the details are entered the bot collects the data from the database and display the details about the donors.

Microsoft sql server Management is an advanced development environment that enables us to configure, manage and administrate SQL server database engine. It is popular and widely used by the database developers. Sql server management studio can be used to do many database releated activites. In this we will working on 'DataBase Engine' for creating and working with Database. There are other server types include Analysis, Reporting & Integration Services. The server name used in this as same as the system name.



Once the patients need the blood they have to ping the bot, they have to give the details such as Bloodgroup and their location. Then as per their details given the result will be details will be displayed in the bot. In this we have connected the sql server and the uipath and we have to create a workflow to search the user question from the database and give the result in the chatbot.

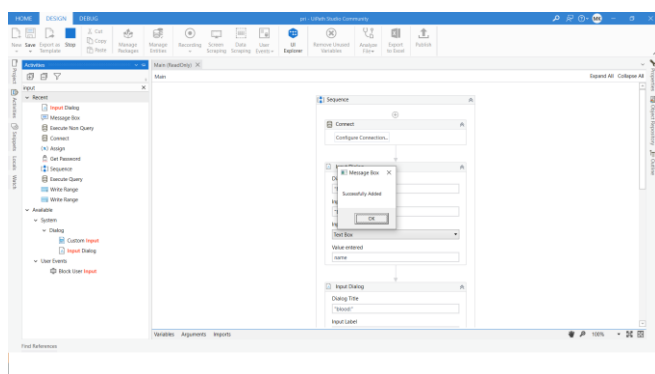
In this the above workflow is created for the blood donors to register themselves in the bot. The donor has to register their details such as Name, Bloodgroup, Address, Phonenumber. Once the donor enter the details the details are stored in the database. The donors details will be stored in the database. We have connect the uipath and sql server database in the uipath workflow process. Once the details are entered it will be stored in the database. The uipath is use to create a workflow for the automation process.



Once the process is over in the uipath then we have the map the uipaath workflow and the google dialogflow by using the uipath. chatbot. We have to map the connection between uipath and dialogflow. Then the chatbot will be created. After that we have to integrate the chatbot into the social media platform such as whatsapp, Facebook etc.

### UiPath

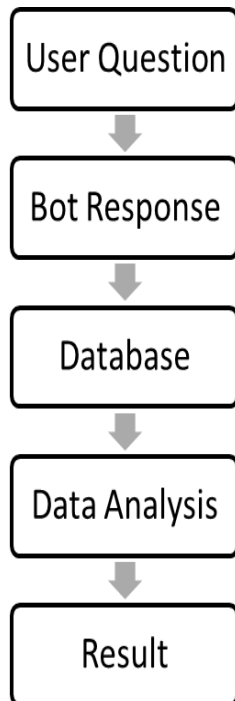
It is a Robotic Process Automation tool that is used for end to end high scale automation. It is used to automate repetitive tasks with the help of drag and drop functionality and eliminates human intervention. It is a visual designer that lets you build automated workflows with pre-activities. This automation will used to either simple or complex task, based on the client requirements. Uipath software offers solutions for enterprises to automate their work easily. The uipath convert a large tasks into a simple automation process. Each diagram represents a certain type of work to perform. Uipath was invented by Daniel Dines in the year 2005.



Once the details are details are entered it will be successfully added to database. Then the user can register through the chatbot. And their data will be stored.

### Google Dialogflow

It is a natural language understanding platform that makes it easy to design and integrate a conversational for web application, bot and related uses. Dialogflow is a part of google cloud platform. It can help in conversational commerce like Bots and its make customer self-services to any work. Dialogflow supports more than 14 Programming languages. Dialogflow is also called as API.AI.



Flowchart for the bot application

### 5. LITERATURE SURVEY

#### A Hybrid approach develop and integrate Chabot in health informatics systems

In this paper, they developed the chatbot for the health purpose. They develop a chatbot that seeks free-form natural languages queries by its users for blood and related services such as list of blood banks, live blood stock, blood donation camps etc. The bot uses a hierarchical approach for parsing queries. A chatbot is made up of two parts, one is Frequently Asked Questions (FAQ) section which handles the FAQ's and the other is the custom section for the queries of the users. [1].

#### Chatbot-based heathcare service with a knowledge base for cloud computing

In this paper they propose a chatbot-based healthcare service with a knowledge base for cloud computing. The proposed method is a mobile health service in the form of a chatbot for the provision of fast treatment in response to accidents that may occur in everyday life, and also in

response to changes of the conditions of patients with chronic diseases. A chatbot is an intelligent conversation platform that interacts with users via a chatting interface, and since its use can be facilitated by linkages with the major social network service messengers, general users can easily access and receive various health services. The proposed framework enables a smooth human–robot interaction that supports the efficient implementation of the chatbot healthcare service. [2]

#### A self-diagnosis medical chatbot using artificial intelligence

The proposed idea is to create a medical chatbot using Artificial Intelligence that can diagnose the disease and provide basic details about the disease before consulting a doctor .To reduce the healthcare costs and improve accessibility to medical knowledge the medical chatbot is built. Certain chatbots acts as a medical reference books, which helps the patient know more about their disease and helps to improve their health. The user can achieve the real benefit of a chatbot only when it can diagnose all kind of disease and provide necessary information. A text-to-text diagnosis bot engages patients in conversation about their medical issues and provides a personalized diagnosis based on their symptoms. Hence, people will have an idea about their health and have the right protection. [3]

#### Chatbot system and method with contextual input and output messages.

A computer program listing appendix is provided via EFS with this application. The information is hereby incorporated by reference as if set forth in full in this application for all purposes. A portion of the disclosure recited in this application contains material which is Subject to copy right protection. Specifically, the computer program listing appendix and possibly other portions of the application may recite or contain source code, data or other functional text. The copyright owner has no objection to the facsimile reproduction of the functional text; otherwise all copyright rights are reserved. [4].

### 6. CONCLUSION

The project “Automated ChatBot Application for Blood Bank Management” aim to act as an important role in saving life of human beings and reduce the panic created in emergency situations. It can implemented in the all the social media platform so the blood searching process will be easy.

### 7. REFERENCES

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