## PROJECT REPORT

**Intelligent Customer Help Desk with Smart** 

**Document Understanding** 

Category: Artificial Intelligence Developer

**Application ID:**SPS\_APL\_20200000720

Project ID: SPS\_PRO\_99

Internship at SmartInternz

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#### INTRODUCTION

#### 1.1 Overview

A typical customer care chatbot can answer simple questions but when some questions are out of its scope it shows error. The application can in such cases pass the question to watson discovery services which can answer it from its pre-loaded set of questions.

## 1.2 Purpose

The purpose is to Enhance the customer helpdesks with Smart Document

Understanding how to use webhooks in watson assistant. Also understanding how to integrate of watson assistant and node-red.

#### 2. LITERATURE SURVEY

#### 2.1 Existing Problem

The typical customer care chatbot can answer simple questions, such as store locations and hours, directions, and maybe even making appointments. 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.

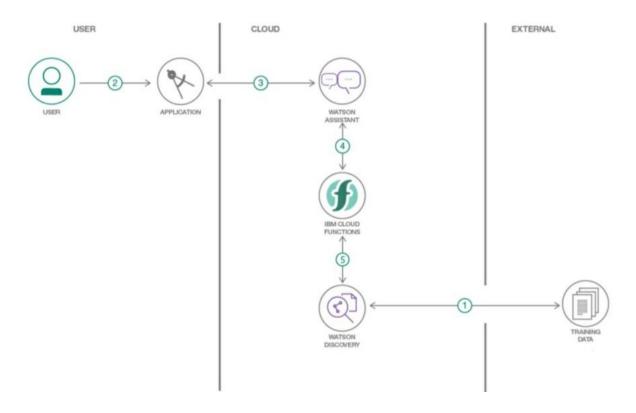
## 2.2 Proposed solution

In this project, If the customer question is about the operation of a device, the application shall pass the question onto Watson Discovery Service, which has been pre-loaded with the device's owner's manual. So now, instead of "Would you like to speak to a customer representative?" we can return relevant sections of the owner's manual to help solve our customers' problems.

To take it a step further, the project shall use the Smart Document Understanding feature of Watson Discovery to train it on what text in the owner's manual is important and what is not. This will improve the answers returned from the queries.

## 3. THEORITICAL ANALYSIS

# 3.1 Block Diagram



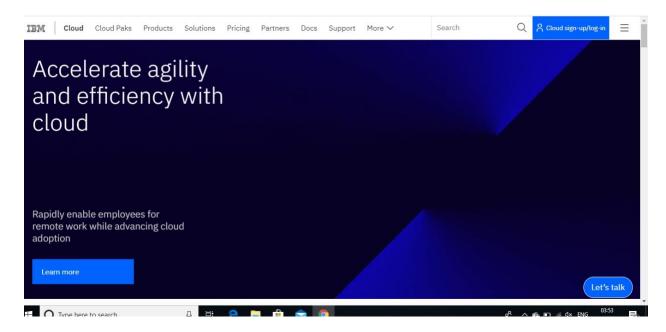
# 3.2 Hardware / Software designing

- 1. Create IBM Cloud services
- 2. Configure Watson Assistant
- 3. Configure Watson Discovery
- 4. Create IBM Cloud Functions Action
- 5. Build Node-RED Flow to Integrate All Services
- 6. Deploy and Run the application

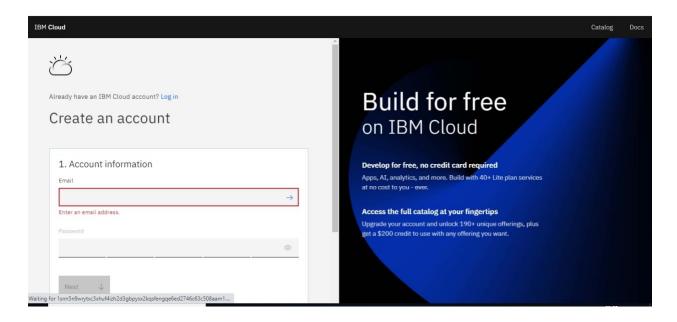
## **4.EXPERIMENTAL UNDERSTANDING**

# 1. Create IBM Cloud Services

To create IBM cloud account, go to <a href="https://www.ibm.com/cloud">https://www.ibm.com/cloud</a>



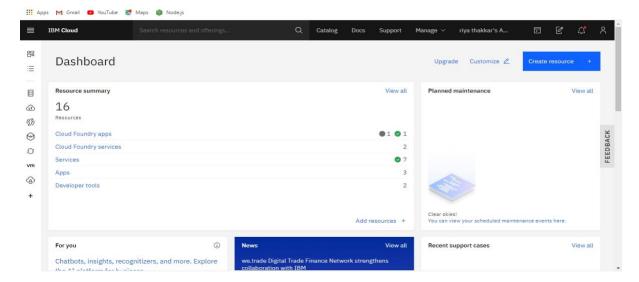
Click on sign-up to register and create an account.



Complete your registration by entering all the required details correctly.

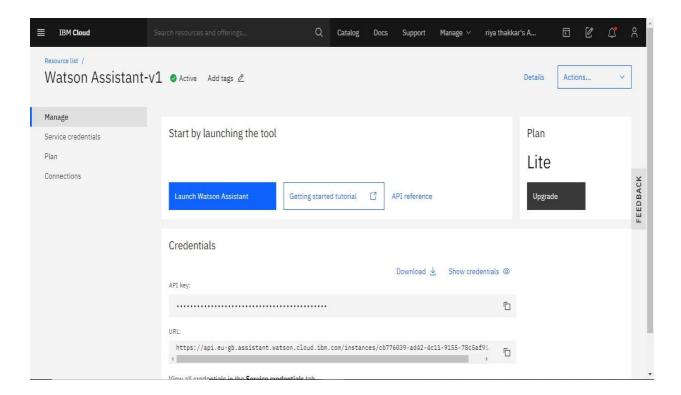
Enter your IBM id and password and login to your cloud account.

After logging in, you can see your IBM Cloud Dashboard.



## 2.Configure Watson Assistant

Type Watson Assistant in the search box, to configure Watson Assistant.



You need a service instance to start.

1. Go to Watson Assistant page in the IBM Cloud™ catalog.

The service instance will be created in the **default** resource group if you do not choose a different one, and it *cannot* be changed later. This group is sufficient for the purposes of trying out the product.

- 2. Sign up for a free IBM Cloud account or log in.
- 3. Click Create.

## Step1. Open Watson Assistant

After you create a Watson Assistant service instance, you land on the **Manage** page of the Watson Assistant dashboard.

1. Click **Launch Watson Assistant**. If you're prompted to log in, provide your IBM Cloud credentials.

A new browser tab or window opens and the Assistants page of Watson Assistant is displayed.

- An assistant named My first assistant is created for you automatically. An assistant is a
  cognitive bot to which you add skills that enable it to interact with your customers in
  useful ways.
- A dialog skill named My first skill is added to the assistant for you automatically.
   A dialog skill is a container for the artifacts that define the flow of a conversation that your assistant can have with your customers.

## **Step 2. Create an Assistant**

An assistant is a cognitive bot to which you add skills that enable it to interact with your customers in useful ways.

1. Click the **Assistants** icon , and then click **Create assistant**.

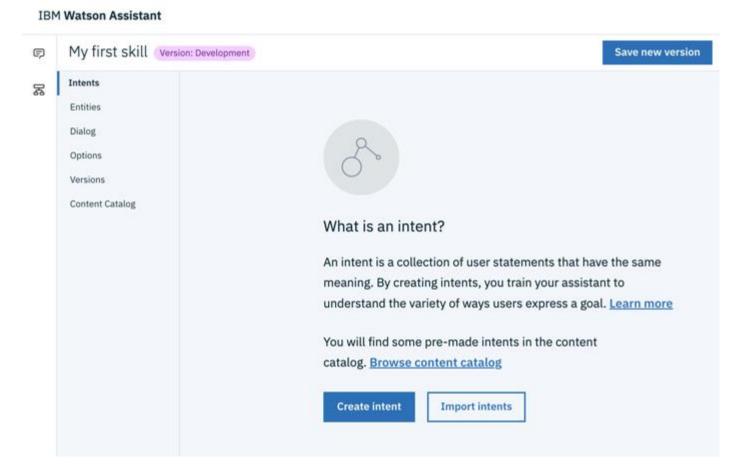
#### Step 3. Create a dialog skill

A *dialog skill* is a container for the artifacts that define the flow of a conversation that your assistant can have with your customers.

- 1. Click the *My first assistant* tile to open the assistant.
- 2. Click Add dialog skill.
- 3. You can also give your skill a name.

## Step4.Add intents from content catalog

When you open the *My first skill*, you land on the *Intents* page.



If available in your location, a tour begins that you can step through to learn about the product. Follow the tour; it provides a great overview of the product.

Add training data that was built by IBM to your skill by adding intents from a content catalog. In particular, you will give your assistant access to the **General** content catalog so your dialog can greet users, and end conversations with them.

### Step5. Build a dialog

A <u>dialog</u> defines the flow of your conversation in the form of a logic tree. It matches intents (what users say) to responses (what the bot says back). Each node of the tree has a condition that triggers it, based on user input.

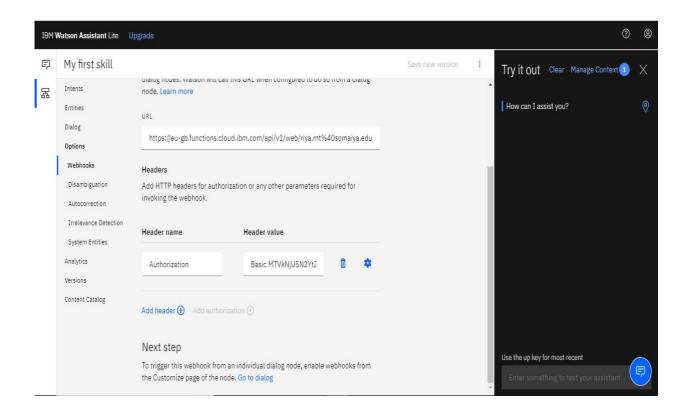
We'll create a simple dialog that handles greeting and ending intents, each with a single node

Create skill, then create intents, entities and dialog. Json file has been provided below.

The Skill ID and API Key is to be noted.

Before proceeding further, let's learn about webhook.

A webhook is a mechanism that allows you to call out to an external program based on something happening in your program. When used in a Watson Assistant dialog skill, a webhook is triggered when the Assistant processes a node that has a webhook enabled. The webhook collects data that you specify or that you collect from the user during the conversation and save in context variables, and sends the data to the Webhook request URL as an HTTP POST request. The URL that receives the webhook is the listener. It performs a predefined action using the information that is provided by the webhook as specified in the webhook definition, and can optionally return a response.



## 3. Configure Watson Discovery

## Step1

After you create an instance of Discovery, you're taken to your list of services.

- 1. Click the Discovery instance you created to go to the service dashboard.
- 2. On the **Manage** page, click **Launch Watson Discovery**. If you're prompted to log in to the tooling, provide your IBM Cloud credentials.

## Step2

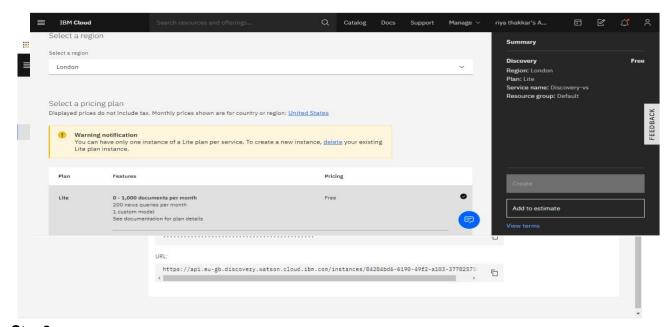
Your first step in the Discovery tooling is to create a data collection.

A collection is a set of your documents. Why would I want more than one collection? There are a few reasons:

- You might want multiple collections to separate results for different audiences.
- The data might be so different that it doesn't make sense for it all to be queried at the same time.

The public, pre-enriched Discovery News data collection is also available for your use. It is ready to query, and you can begin to create queries on it immediately. You cannot adjust its configuration or add documents to Discovery News.

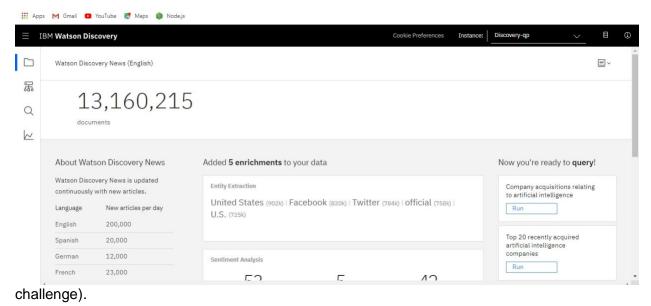
- 1. Click and choose **Create environment**.
  - 2. When your environment is ready, click the **Upload your own data** button, then you can **Name your new collection**. Name your collection **InstallDocs**.



- Upload the document to your collection. Either drag and drop it into your collection, or click browse from computer to upload documents. After the upload is complete, the following information displays:
- The number of documents (1).
- The fields identified from your document. You should see one field identified, text. We identify additional fields in a bit.
- Enrichments applied to your document. The Entity Extraction, Sentiment Analysis, Category Classification, and Concept Tagging enrichments are automatically applied to the text field by Discovery. For more information about enrichments, see Adding enrichments.
- Pre-built queries you can run immediately.
- Let's try a quick Natural Language Query to level set. Click Build your own query on the lower right.
- On the Build queries screen, click on Search for documents, then Use natural language. Enter What are the minimum hardware requirements and click the Run query button. Click the JSON tab on the right. The result is not as precise as it could be, so let's improve it with Smart Document Understanding.
- Click on the name of the collection (InstallDocs) on the upper left to return to the Overview screen.

(Launch watson discovery . Create new data collection and give it a name.

You have to get an api key for covid-19 database after registering for IBM call for code 2020



## Step4

Click Configure data on the upper right.

- On the Configure data screen, there are three tabs: Identify fields, Manage fields, and Enrich fields.
- The Watson Explorer Installation Guide is displayed and ready for annotation on the Identify fields tab. All available fields (answer, author, footer, header, question, subtitle, table\_of\_contents, text, and title) are displayed in the Field labels list on the right. If you purchase an Advanced or Premium plan you can create your own custom labels.
- Click on title, then select the marker next to Installation and Integration Guide. Click Submit page.
- In the page preview on the left, click on page 3. Note that the title is already predicted for this page. Click Submit page.
- On page 4, select the footer label and select the marker next to the footer. Click the Submit page button.
- On pages 5 and 6, annotate the footers with the footer label. Submit each page. Click through a few more pages; note that the footer was predicted properly by Discovery.

  Annotate the titles (flush left) and subtitles (indented) on pages 7, 9, and 10 and submit

each page individually.

- Click through a few more pages and check the predicted titles and subtitles. If any need to be changed, annotate those pages, and click Submit page.
- Now click on the Manage fields tab and under Improve query results by splitting your documents split the document, based on subtitle.

## Step5

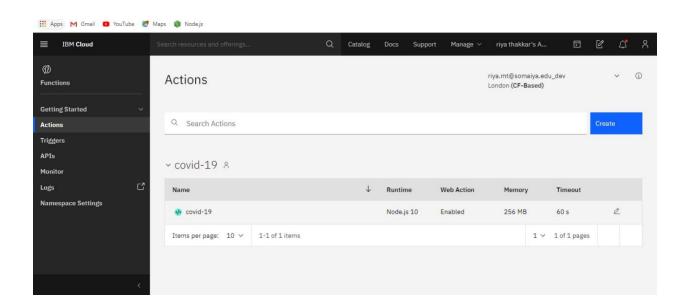
Click Build your own query on the bottom right.

- On the Build queries screen, click on Search for documents, then Use natural language. Enter What are the minimum hardware requirements and click the Run query button.
- Click the JSON tab on the right. Look at the text under results. The answers returned for the query are much more precise.

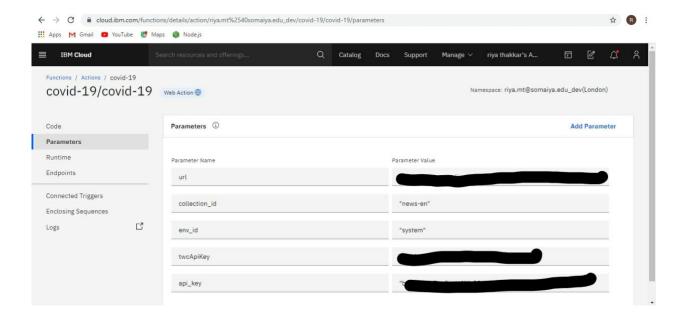
#### 4.Create IBM cloud functions action

\_

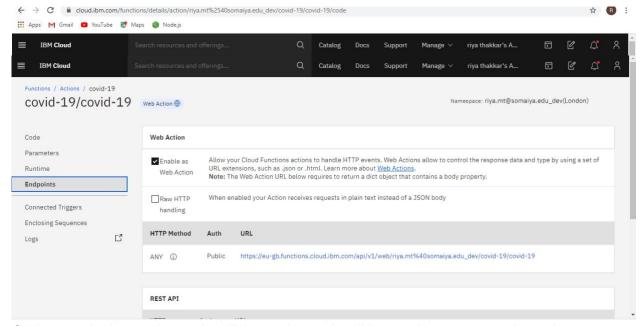
Create an action and give it a name.



## Add parameters.



Write the code and invoke it with parameters. Code for it is provided in the report later.



Click on endpoints and note the URL mentioned. It will be used in watson assistant later.

# Detailed steps:

With IBM Cloud™ Functions you can use your favorite programming language to write lightweight code that runs app logic in a scalable way. You can run code on-demand with HTTP-based API requests from applications or run code in response to IBM Cloud services and third-party events. The Function-as-a-Service (Faas) programming platform is based on the open source project Apache OpenWhisk.

## Working with actions

With IBM Cloud™ Functions, you can create stateless code snippets, called actions, that are set to perform one specific task. To learn more about actions and other Functions terms, see terminology.

Click an option to get started.

To get started with Cloud Functions, try creating the Hello World quickstart template.

- 2. Create an IBM Cloud account or log in to an existing account.
- 3. Navigate to the Cloud Functions dashboard.
- 4. Click Start Creating > Quickstart Templates and select the Hello World template.
- 5. Create a package for your actions by inputting a unique name in the Package Name field.
- 6. Select a runtime from the drop-down menu in the Action helloworld section. You can preview the code for the sample action in each available runtime before you deploy the template.
- 7. Click Deploy. You created an action. Great job!
- 8. Run the action by clicking Invoke. Invoking an action manually runs the app logic that the action defines. In the Activations panel, you can see the "Hello stranger!" greeting produced by the action
- 9. Optional: Click Change Input to change the action or try your own.
  - a. Paste the following code into the Change Input box and change the name value.

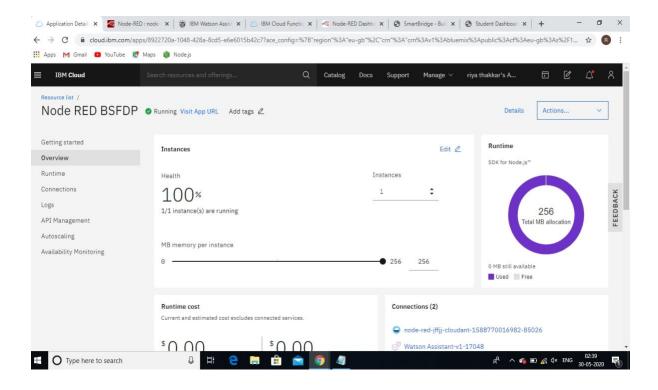
## { "name": "xxxxx" }

b. Then, click Invoke to run the action with your updates. The result is shown in the Activations panel. You can repeat this process as many times as you like. Good work! You created your first action. To clean up this action, click the overflow menu and select Delete Action.

#### Step

Get up and running quickly with the Hello World JavaScript example code. This example creates a basic hello action, which you can manually invoke to run its app logic.

## 4. Build Node-RED Flow to Integrate All Services



#### STEP 1: FIND THE NODE-RED STARTER IN THE IBM CLOUD CATALOG

Follow these steps to create a Node-RED Starter application in the IBM Cloud.

- Log in to IBM Cloud.
- Open the catalog and search for node-red .
- · Click on the Software tab .
- · Click on the Node-RED App tile .
- Catalog entry Node-RED Starter Kit
- Click on the Create app button to continue.

## STEP 2: CONFIGURE YOUR APPLICATION

Now you need to configure the Node-RED Starter application.

• On the App details page, a randomly generated name will be suggested – Node RED SSLPD in the screenshot below. Either accept that default name or provide a unique name for your application. This will become part of the application URL. Note: If the name is not unique, you will see an error message and you must enter a different name before you can continue.

• The Node-RED Starter application requires an instance of the Cloudant database service to store your application flow configuration. Select the region the service should be created in and what pricing plan it should use. Note: You can only have one Cloudant instance using the Lite plan. If you have already got an instance, you will be able to select it from the Pricing plan select box. You can have more than one Node-RED Starter application using the same Cloudant service instance.

Click the Create button to continue. This will create your application, but it is not yet deployed to IBM Cloud.

#### STEP 3: ENABLE THE CONTINUOUS DELIVERY FEATURE

- At this point, you have created the application and the resources it requires, but you have not deployed it anywhere to run. This step shows how to setup the Continuous Delivery feature that will deploy your application into the Cloud Foundry space of IBM Cloud.
- On the next screen, click the Deploy your app button to enable the Continuous Delivery feature for your application.
- Enable continuous delivery in Node-RED app
- You will need to create an IBM Cloud API key to allow the deployment process to access your resources. Click the New button to create the key. A message dialog will appear. Read what it says and then confirm and close the dialog.
- Increase the Memory allocation per instance slider to 256MB. If you do not increase the memory allocation, your Node-RED application might not have sufficient memory to run successfully.
- The Node-RED Starter kit only supports deployment to the Cloud Foundry space of IBM Cloud. Select the region to deploy your application to. This should match the region you created your Cloudant instance in. Lite users might only be able to deploy to your default region.
- Select the region to create the DevOps toolchain.
- Click Create. This will take you back to the application details page.
- Create the Node-RED Starter app
- After a few moments, the Continuous Delivery section will refresh with the details of your newly created Toolchain. The Status field of the Delivery Pipeline will show In progress.

That means your application is still being built and deployed.

- Continuous delivery status
- Click on the In progress link to see the full status of the Delivery Pipeline.
- Delivery pipeline, view logs
- The Deploy stage will take a few minutes to complete. You can click on the View logs and history link to check its progress. Eventually the Deploy stage will go green to show it has passed. This means your Node-RED Starter application is now running.

## STEP 4: OPEN THE NODE-RED APPLICATION

Now that you've deployed your Node-RED application, let's open it up!

- Open your IBM Cloud Resource list by selecting the sidebar menu (1) and then selecting
   Resource List .
- You will see your newly created Node-RED Application listed under the Apps section (1).
   You will also see a corresponding entry under the Cloud Foundry apps section (2). Click on this Cloud Foundry app entry to go to your deployed application's details page.
   From the details page, click the Visit App URL link to access your Node-RED Starter application.

#### STEP 5: CONFIGURE YOUR NODE-RED APPLICATION

The first time you open your Node-RED app, you'll need to configure it and set up security.

- A new browser tab will open with the Node-RED start page.
- Configure Node-RED app
- On the initial screen, click Next to continue.
- Secure your Node-RED editor by providing a username and password. If you need to change these at any point, you can either edit the values in the Cloudant database, or override them using environment variables. The documentation on nodered.org describes how to do this. Click Next to continue.
- The final screen summarizes the options you've made and highlights the environment variables you can use to change the options in the future. Click Finish to proceed.
- Node-RED will save your changes and then load the main application. From here you can click the Go to your Node-RED flow editor button to open the editor.

#### STEP 6: ADD EXTRA NODES TO YOUR NODE-RED PALETTE

Node-RED provides the palette manager feature that allows you to install additional nodes directly

from the browser-based editor. This is convenient for trying nodes out, but it can cause issues due to

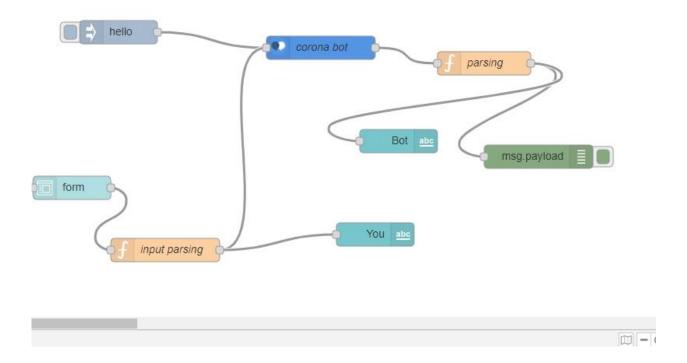
the limited memory of the default Node-RED starter application.

The recommended approach is to edit your application's package.json file to include the additional

node modules and then redeploy the application.

This step shows how to do that in order to add the node-red-dashboard module.

- On your application's details page, click the url in the Continuous Delivery box. This will take you to a git repository where you can edit the application source code from your browser.
- Scroll down the list of files and click on package.json. This file lists the module dependencies of your application.
- Click the Edit button
- Add the following entry to the top of the dependencies section:
- At this point, the Continuous Delivery pipeline will automatically run to build and deploy that change into your application. If you view the Delivery Pipeline you can watch its progress. The Build section shows you the last commit made and the Deploy section shows the progress of redeploying the application.
- Once the Deploy stage completes, your application will have restarted and now have the node-red-dashboard nodes preinstalled.

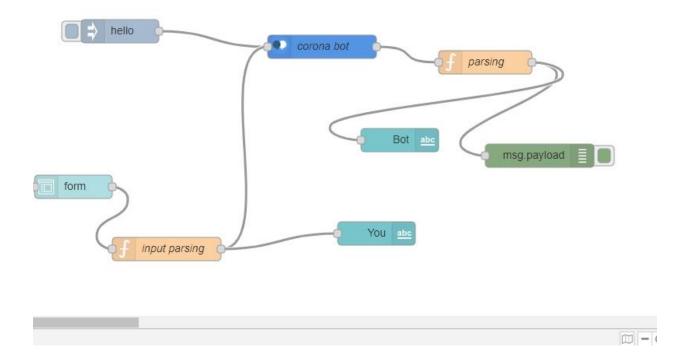


# 7. Deploy and run the application

Now deploy the app. It will take a few minutes. Then copy tye node-red link till .net and add /ui in the end.

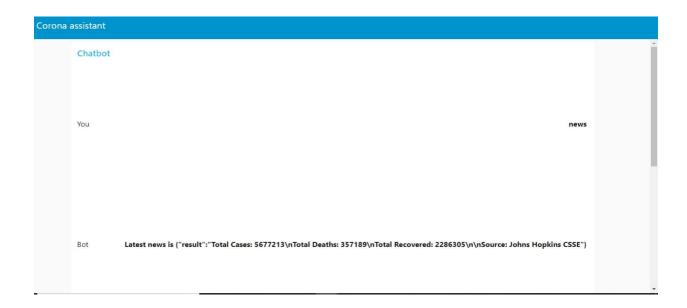
You chatbot is ready.

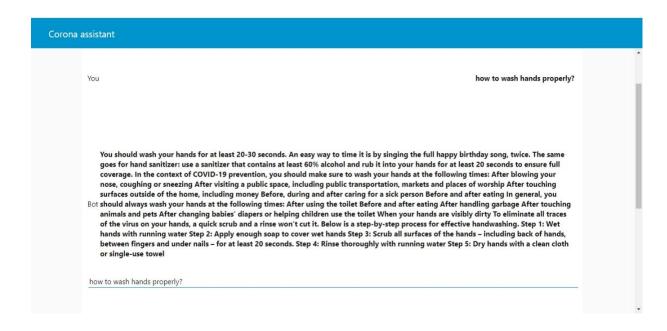
# 5. FLOWCHART



## 6.RESULT

Corona assistant			
	NIMHANS: 08046110007 Mumbai based mental health organ	r corona-virus: - +91-11-23978046 Helpline Number for senior citi nisation mPower and the government of Maharasthra and BMC: 1 0-121-0980 Assam Police and the Department of Psychiatry, GMCH or 6026901056/57/58.	200-120-
	helpline numbers		
	SUBMIT	CANCEL	





#### 7.ADVANTAGES & DISADVANTAGES

## Advantages:

- Faster Customer Service
- Increased Customer Satisfaction
- Lower Labour Costs
- · Variety of Uses
- Data collection
- 24-7 availability
- Multiple Customer Handling

## **Disadvantages:**

- Limited Responses for Customers
- Customers Could Become Frustrated
- Maintenance
- They aren't human
- Time-Consuming

### 8. APPLICATIONS

A Product or Software Company Customer Help Desk

#### 9. CONCLUSION

An Intelligent Customer Helpdesk with Smart Document Understanding is made using various IBM Services like IBM Watson Discovery, IBM Watson and IBM Cloud Function.

#### **10. FUTURE SCOPE**

A More Customer friendly Chatbot, or a personalized Chatbot can be made.

#### 11. BIBLIOGRAPHY

https://cloud.ibm.com/docs

#### 12.SOURCE CODE

Json file code for cloud function actions

```
* main() will be run when you invoke this action
* @param Cloud Functions actions accept a single parameter, which must be a JSON object.
* @return The output of this action, which must be a JSON object.
*/
var request = require("request-promise");
const DiscoveryV1 = require("watson-developer-cloud/discovery/v1");
function getRandomInt(max) {
 return Math.floor(Math.random() * Math.floor(max));
}
const statesMap = {
 alaska: "99501:US",
 alabama: "35801:US",
 arkansas: "72201:US",
 american_samoa: "96799:US",
 arizona: "85001:US",
 california: "90001:US",
 colorado: "80201:US",
 connecticut: "06101:US",
```

district\_of\_columbia: "20001:US", delaware: "19901:US", florida: "33124:US", georgia: "30301:US", guam: "GU:US", hawaii: "96801:US", iowa: "50301:US", idaho: "83254:US", illinois: "60601:US", indiana: "46201:US", kansas: "67201:US", kentucky: "41701:US", Iouisiana: "70112:US", massachusetts: "02101:US", maryland: "21201:US", maine: "04032:US", michigan: "49036:US", minnesota: "55801:US", missouri: "63101:US", mississippi: "39530:US", montana: "59044:US", north\_carolina: "27565:US", north\_dakota: "58282:US", nebraska: "68901:US", new\_hampshire: "03217:US", new\_jersey: "07450:US", new\_mexico: "87500:US", nevada: "89501:US", new york: "10001:US", ohio: "44101:US", oklahoma: "74101:US", oregon: "74101:US", pennsylvania: "15201:US", puerto rico: "00600:US", rhode\_island: "02840:US", south\_carolina: "29020:US", south\_dakota: "57401:US", tennessee: "37201:US", texas: "78701:US", utah: "84321:US", virginia: "24517:US", virgin\_islands: "00801:US", vermont: "05751:US", washington: "98004:US", wisconsin: "53201:US", west\_virginia: "25813:US", wyoming: "82941:US",

```
};
function formatStates(state) {
 state = state.toLowerCase();
 state = state.replace(" ", "_");
 return state;
}
async function main(params) {
 if (params.type === "api") {
  try {
   const summary = await request({
     method: "GET",
     uri: "https://api.covid19api.com/summary",
    ison: true,
   });
   if (params.location) {
     // country was the old param, could be states in us.
     state = formatStates(params.location);
     if (state in statesMap) {
      const uri =
https://api.weather.com/v3/wx/disease/tracker/state/60day?postalKey=${statesMap[state]}&for
mat=json&apiKey=${params.twcApiKey}`;
      const data = await request({
       method: "GET",
       uri: uri,
       json: true,
      });
      return {
       result: `Total Cases: ${data.covid19.confirmed[0]}\nTotal Deaths:
${data.covid19.deaths[0]}\n\nSource: ${data.covid19.source[0]}`,
      };
     }
     for (var i = 0; i < summary.Countries.length; i++) {
       summary.Countries[i].Country.toLowerCase() ===
        params.location.toLowerCase() ||
       summary.Countries[i].CountryCode.toLowerCase() ===
        params.location.toLowerCase()
      ) {
       return {
        result: `Total Cases: ${summary.Countries[i].TotalConfirmed}\nTotal Deaths:
${summary.Countries[i].TotalDeaths}\nTotal Recovered:
$\summary.Countries[i].TotalRecovered\\n\nSource: Johns Hopkins CSSE\,
```

```
};
      }
     return { error: "did not find location" };
   let totalCases = summary.Global.TotalConfirmed;
   let totalDeaths = summary.Global.TotalDeaths;
   let totalRecovered = summary.Global.TotalRecovered;
   return {
     result: `Total Cases: ${totalCases}\nTotal Deaths: ${totalDeaths}\nTotal Recovered:
$\totalRecovered\\n\nSource: Johns Hopkins CSSE\,
   };
  } catch (err) {
   return { error: "it failed : " + err };
 } else {
  const discovery = new DiscoveryV1({
   version: "2019-03-25",
   iam_apikey: params.api_key,
   url: params.url,
  });
  const offset = getRandomInt(50);
  const queryParams = {
   environment_id: params.env_id,
   collection_id: params.collection_id,
   natural_language_query:
     "corona virus " + params.input || "corona virus news",
   count: 3,
   offset: offset,
  };
  try {
   data = await discovery.query(queryParams);
   let response = data.results.map((v, i) => {
     return `${v.title}
          ${v.text}
          ${v.url}`;
   });
   return {
     result:
      "Here are some news articles we found. We can't verify the accuracy of all of these
sources.\n\n" +
      response.join("\n\n"),
  } catch (err) {
```

```
return { error: "it failed : " + err };
  }
}
Watson Assistant intents
What are the symptoms of coronavirus?, basics
What is coronavirus?, basics
How and where was coronavirus originated?,basics
Should i stop buying products from China?, china
Am I at risk for COVID-19 from a package or products shipping from China?, china
Is it safe to buy Chinese products?, china
Does coronavirus spread from person to person?,contagious
Is coronavirus contagious?,contagious
hello, greetings
good afternoon, greetings
good evening, greetings
hi, greetings
good morning, greetings
hey, greetings
helpline for corona treatment, helpline
helpline for mental health, helpline
helpline for covid treatment, helpline
numbers for senior citizens, helpline
helpline numbers for anxiety, helpline
quarantine,lockdown
quarantine time,lockdown
lockdown dates,lockdown
lockdown updates,lockdown
lockdown extension,lockdown
Latest news about covid-19,news
Latest news on coronavirus.news
What is quarantine?, social distancing
What is social distancing?, social distancing
Can there be false positive results?,testresults
Can there be false negative results?,testresults
If you test negative can you still get COVID-19 later?, testresults
What do coronavirus test results mean?, testresults
ty,thanks
```

thank you,thanks thanks a lot,thanks thanks,thanks tysm,thanks vaccination for covid,treatment cure for corona,treatment cure for covid,treatment
vaccination for corona,treatment
vaccine for covid,treatment
vaccine for corona,treatment
treatment for corona,treatment
treatment for covid,treatment
coronavirus condition worldwide,updates
coronavirus updates,updates
How much do PPEs cost?,washhands
Should I wear a mask?,washhands
How to wash hands properly to prevent corona?,washhands

### Watson Assistant entities

basics,origin,origins,origen basics,corona,covid,covid-19 covid,covid,covid-19,corona,coronavirus,sars greetings,good afternoon,ga,gud aftrnoon,goodafternoon,afternoon greetings,good morning,gm,gud mrng,goodmorning,morning greetings,good evening,ge,goodevening,evening,gud evning,night greetings, hi, HI, Hello, hey, hiya helpline, helpline, number, helpline number news,news,reports,headlines,articles,media,newspaper,newsletter socialdistancing, social distancing socialdistancing, quarantine, quarantines, lockdown, quarentine test,negative test,results test,test treatment, treatment, cure, medicine washhands,mask,masks washhands, wash, sanitize, disinfect, rinse, washing, clean, sanitise, sanitizing, sterilize, decontaminat washhands, PPE, PPEs

Watson Assistant dialog code(.json file code)

```
{
"intents": [
```

```
"intent": "contagious",
"examples": [
  "text": "Is coronavirus contagious?"
 },
  "text": "Does coronavirus spread from person to person?"
"description": ""
"intent": "china",
"examples": [
  "text": "Should i stop buying products from China?"
  "text": "Am I at risk for COVID-19 from a package or products shipping from China?"
  "text": "Is it safe to buy Chinese products?"
"description": ""
"intent": "washhands",
"examples": [
  "text": "Should I wear a mask?"
  "text": "How much do PPEs cost?"
  "text": "How to wash hands properly to prevent corona?"
"description": ""
"intent": "socialdistancing",
"examples": [
  "text": "What is social distancing?"
```

```
},
   "text": "What is quarantine?"
 "description": ""
 "intent": "testresults",
 "examples": [
   "text": "Can there be false negative results?"
   "text": "Can there be false positive results?"
   "text": "If you test negative can you still get COVID-19 later?"
    "text": "What do coronavirus test results mean?"
 "description": ""
 "intent": "basics",
 "examples": [
    "text": "What is coronavirus?"
  },
    "text": "What are the symptoms of coronavirus?"
  },
   "text": "How and where was coronavirus originated?"
 "description": ""
},
 "intent": "news",
 "examples": [
    "text": "Latest news about covid-19"
```

```
"text": "Latest news on coronavirus"
"description": ""
"intent": "thanks",
"examples": [
   "text": "ty"
   "text": "thanks"
   "text": "thanks a lot"
  "text": "thank you"
   "text": "tysm"
"description": ""
"intent": "treatment",
"examples": [
   "text": "treatment for covid"
   "text": "cure for corona"
   "text": "cure for covid"
   "text": "vaccination for corona"
  "text": "vaccination for covid"
   "text": "vaccine for covid"
 },
```

```
"text": "vaccine for corona"
  "text": "treatment for corona"
"description": ""
"intent": "updates",
"examples": [
  "text": "coronavirus updates"
  "text": "coronavirus condition worldwide"
"description": ""
"intent": "lockdown",
"examples": [
  "text": "lockdown updates"
  "text": "quarantine time"
  "text": "quarantine"
  "text": "lockdown dates"
  "text": "lockdown extension"
"description": ""
"intent": "helpline",
"examples": [
  "text": "numbers for senior citizens"
```

```
},
     "text": "helpline numbers for anxiety"
     "text": "helpline for mental health"
     "text": "helpline for corona treatment"
     "text": "helpline for covid treatment"
  "description": ""
  "intent": "greetings",
  "examples": [
     "text": "good evening"
     "text": "good afternoon"
     "text": "hi"
     "text": "hello"
     "text": "hey"
     "text": "good morning"
  "description": ""
"entities": [
  "entity": "socialdistancing",
  "values": [
     "type": "synonyms",
```

```
"value": "social distancing",
   "synonyms": []
  },
   "type": "synonyms",
   "value": "quarantine",
   "synonyms": [
     "quarantines",
     "lockdown",
     "quarentine"
  }
 ],
 "fuzzy_match": true
 "entity": "covid",
 "values": [
   "type": "synonyms",
   "value": "covid",
   "synonyms": [
     "covid-19",
     "corona",
     "coronavirus",
     "sars"
 "fuzzy_match": true
},
 "entity": "test",
 "values": [
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   "value": "results",
   "synonyms": []
   "type": "synonyms",
   "value": "test",
   "synonyms": []
   "type": "synonyms",
   "value": "negative",
```

```
"synonyms": []
  }
 "fuzzy_match": true
 "entity": "washhands",
 "values": [
   "type": "synonyms",
    "value": "mask",
   "synonyms": [
     "masks"
   "type": "synonyms",
   "value": "wash",
    "synonyms": [
     "sanitize",
     "disinfect",
     "rinse",
     "washing",
     "clean",
     "sanitise",
     "sanitizing",
     "sterilize",
     "decontaminate"
  },
    "type": "synonyms",
   "value": "PPE",
    "synonyms": [
     "PPEs"
   ]
  }
 "fuzzy_match": true
},
 "entity": "greetings",
 "values": [
   "type": "synonyms",
   "value": "good evening",
   "synonyms": [
```

```
"ge",
     "goodevening",
     "evening",
     "gud evning",
     "night"
  },
   "type": "synonyms",
   "value": "good morning",
    "synonyms": [
    "gm",
     "gud mrng",
     "goodmorning",
     "morning"
  },
   "type": "synonyms",
   "value": "hi",
    "synonyms": [
     "HI",
     "Hello",
     "hey",
     "hiya"
  },
   "type": "synonyms",
   "value": "good afternoon",
    "synonyms": [
     "ga",
     "gud aftrnoon",
     "goodafternoon",
     "afternoon"
  }
 "fuzzy_match": true
},
 "entity": "basics",
 "values": [
   "type": "synonyms",
   "value": "corona",
   "synonyms": [
```

```
"covid",
     "covid-19"
  },
   "type": "synonyms",
   "value": "symptoms",
   "synonyms": [
     "symptom",
     "symtoms"
   "type": "synonyms",
   "value": "origin",
    "synonyms": [
     "origins",
     "origen"
 "fuzzy_match": true
},
 "entity": "treatment",
 "values": [
   "type": "synonyms",
   "value": "treatment",
   "synonyms": [
     "cure",
     "medicine"
   ]
 "fuzzy_match": true
},
 "entity": "helpline",
 "values": [
   "type": "synonyms",
   "value": "helpline",
    "synonyms": [
     "number",
     "helpline number"
   ]
```

```
}
   "fuzzy_match": true
  },
   "entity": "news",
   "values": [
      "type": "synonyms",
     "value": "news",
     "synonyms": [
      "reports",
      "headlines",
       "articles",
      "media",
       "newspaper",
      "newsletter"
    }
   "fuzzy_match": true
 ],
 "metadata": {
  "api_version": {
   "major_version": "v2",
   "minor_version": "2018-11-08"
  "from-sample": true
 },
 "webhooks": [
   "url": "https://eu-gb.functions.cloud.ibm.com/api/v1/web/riya.mt%40somaiya.edu_dev/covid-
19/covid-19.json",
   "name": "main_webhook",
   "headers": [
     "name": "Authorization",
     "value": "Basic
MTVkNjU5N2YtZmIzOS00MjE2LTk4NDUtM2NhZGI5OTZjYmZkOnE5bEtEWUVTVzN5R1VqZj
FWRUhtMFNjYVhJQUFEc2xEUk5Dc29IRWhjVEo5QUR5WXJDN1Z1eUhkRnFBNEh0dVog"
 "dialog_nodes": [
```

```
"type": "response condition",
 "output": {
  "text": {
   "values": [
     "Latest news is $webhook_result_1"
   "selection_policy": "sequential"
 "parent": "node_6_1590577304067",
 "conditions": "@news",
 "dialog_node": "response_9_1590592322838"
},
 "type": "response condition",
 "output": {
  "text": {
   "values": [
     "I didn't understand. You can try rephrasing."
   "selection_policy": "sequential"
 "parent": "node 7 1590338716804",
 "conditions": "anything_else",
 "dialog_node": "response_1_1590342401797",
 "previous_sibling": "response_9_1590342393570"
},
 "type": "response condition",
 "output": {
  "text": {
   "values": [
     "Good Morning. How can I help you?"
   "selection policy": "sequential"
  }
 "parent": "node_7_1590338716804",
 "conditions": "@greetings:(good morning)",
 "dialog_node": "response_7_1590419757159",
 "previous_sibling": "response_1_1590342401797"
},
 "type": "response_condition",
 "output": {
  "text": {
```

```
"values": [
     "Good Afternoon. How can I help you?"
   "selection_policy": "sequential"
 },
 "parent": "node_7_1590338716804",
 "conditions": "@greetings:(good afternoon)",
 "dialog_node": "response_10_1590419791609",
 "previous_sibling": "response_7_1590419757159"
},
 "type": "response_condition",
 "output": {
  "text": {
   "values": [],
   "selection_policy": "sequential"
  }
 },
 "parent": "node_7_1590338716804",
 "dialog_node": "response_4_1590419838765",
 "previous_sibling": "response_7_1590419821603"
},
 "type": "response_condition",
 "output": {
  "text": {
   "values": [
     "Good Evening. How can I help you?"
   "selection_policy": "sequential"
 "parent": "node 7 1590338716804",
 "conditions": "@greetings:(good evening)",
 "dialog_node": "response_7_1590419821603",
 "previous_sibling": "response_10_1590419791609"
 "type": "response_condition",
 "output": {
  "text": {
   "values": [
    "Hello. How can I help you?"
   ],
   "selection_policy": "sequential"
```

```
},
 "parent": "node_7_1590338716804",
 "conditions": "@greetings",
 "dialog_node": "response_9_1590342393570",
 "previous_sibling": "response_10_1590342381373"
},
 "type": "response_condition",
 "output": {
  "text": {
   "values": [
     "Hello. How can I help you?"
   "selection_policy": "sequential"
 "parent": "node_7_1590338716804",
 "conditions": "#greetings",
 "dialog_node": "response_10_1590342381373"
},
 "type": "response_condition",
 "parent": "node_2_1590420081112",
 "conditions": "anything else",
 "dialog_node": "response_10_1590501300379",
 "previous_sibling": "response_6_1590420366962"
 "type": "response_condition",
 "output": {
  "generic": [
   {
     "values": [
       "text": "What would you like to know? Please be specific."
     "response_type": "text",
     "selection_policy": "sequential"
   }
  ]
 "parent": "node_2_1590420081112",
 "conditions": "#updates",
 "dialog_node": "response_6_1590420366962"
},
```

```
"type": "standard",
 "title": "social distancing1",
 "output": {
  "generic": [
   {
     "values": [
       "text": "It is a strict isolation imposed to prevent the spread of disease."
      }
     "response_type": "text",
     "selection_policy": "sequential"
  ]
 "conditions": "#socialdistancing | @socialdistancing:quarantine",
 "dialog_node": "node_5_1590511065225",
 "previous_sibling": "node_6_1590511015209"
 "type": "standard",
 "title": "Anything else",
 "output": {
  "generic": [
   {
     "values": [
       "text": "I didn't understand. You can try rephrasing."
      },
       "text": "Can you reword your statement? I'm not understanding."
      },
       "text": "I didn't get your meaning."
     "response_type": "text",
     "selection_policy": "random"
  ]
 "conditions": "anything_else",
 "dialog_node": "Anything else",
 "previous_sibling": "node_4_1590422057790",
 "disambiguation_opt_out": true
},
{
```

```
"type": "standard",
   "title": "test",
   "output": {
     "generic": [
       "values": [
          "text": "Coronavirus test results are not 100% accurate as of now. There can be false
positives and false negatives too. You should check for symptoms and contact a medical
practitioner as soon as possible in case of discomfort."
       ],
       "response_type": "text",
       "selection_policy": "sequential"
      }
    ]
   "conditions": "#testresults || @test",
   "dialog_node": "node_6_1590511740038",
   "previous_sibling": "node_8_1590511196226"
   "type": "standard",
   "title": "corona2",
   "output": {
     "generic": [
       "values": [
          "text": "The recent outbreak began in Wuhan, a city in the Hubei province of China.
Reports of the first COVID-19 cases started in December 2019.\nCoronaviruses are common in
certain species of animals, such as cattle and camels. Although the transmission of
coronaviruses from animals to humans is rare, this new strain likely came from bats, though one
study suggests pangolins may be the origin.\nHowever, it remains unclear exactly how the virus
first spread to humans."
        }
       "response_type": "text",
       "selection_policy": "sequential"
      }
    1
   "conditions": "#basics | @basics:origin",
   "dialog node": "node 5 1590498782996",
   "previous_sibling": "node_9_1590498718865"
```

}, {

```
"type": "standard",
   "title": "helpline",
   "output": {
     "generic": [
       "values": [
          "text": "These are the helpline numbers:
                                                                            \nCentral Helpline
Number for corona-virus: - +91-11-
23978046\n
                                                                          Helpline Number for
senior citizens:
1077
                                                                               NIMHANS:
08046110007\n\nMumbai-based mental health organisation mPower and the government of
Maharasthra and BMC: 1800-120-820050\n\nPoddar Foundation and Rotary Club of Bombay:
1800-121-0980\n\nAssam Police and the Department of Psychiatry, GMCH and Clinical
Psychologists/psychiatric Social Workers: 6026901053/54/55 or 6026901056/57/58."
       ],
       "response_type": "text",
       "selection_policy": "sequential"
    ]
   "conditions": "#helpline || @helpline",
   "digress_in": "does_not_return",
   "dialog_node": "node_3_1590422288467",
   "previous_sibling": "node_5_1590511065225"
  },
   "type": "standard",
   "title": "wash hands2",
   "output": {
     "generic": [
       "values": [
          "text": "If you are healthy, you only need to wear a mask if you are taking care of a
person with COVID-19.\nWear a mask if you are coughing or sneezing.\nMasks are effective
only when used in combination with frequent hand-cleaning with alcohol-based hand rub or
soap and water.\nlf you wear a mask, then you must know how to use it and dispose of it
properly."
        }
       "response type": "text",
       "selection policy": "sequential"
     }
    1
```

```
},
   "conditions": "#washhands | @washhands:mask",
   "dialog_node": "node_6_1590510126901",
   "previous_sibling": "node_5_1590510092244"
   "type": "standard",
   "title": "wash hands1",
   "output": {
     "generic": [
       "values": [
         "text": "In March, one PPE kit with an N95 mask cost around Rs 1,100.\nThe same
package today costs Rs 812. With a three-ply mask,\nit now costs Rs 660 as against the earlier
price of Rs 990.\nAt Rs 42, an N95 mask is down by Rs 23. A 3-ply mask earlier cost Rs 16 but
now it's priced at Rs 11. A month into anti-hoarding drives and stringent guidelines, the civic
body said it has also overcome the shortage with the help of donors and CSR funds.\n\n\n"
       ],
       "response_type": "text",
       "selection_policy": "sequential"
     }
    ]
   "conditions": "#washhands | @washhands:PPE",
   "dialog_node": "node_5_1590510092244",
   "previous_sibling": "node_2_1590502584796"
  },
   "type": "standard",
   "title": "covid",
   "metadata": {
     "callout": {
      "name": "main_webhook",
      "type": "webhook",
      "parameters": {
       "type": "api",
       "country": "US"
      "result_variable": "webhook_result_1"
     "_customization": {
      "mcr": true
    }
   "conditions": "@covid",
```

```
"dialog node": "node 2 1590420081112",
 "previous_sibling": "node_5_1590498782996"
},
 "type": "standard",
 "metadata": {
  " customization": {
   "mcr": true
  }
 },
 "conditions": "#greetings || @greetings",
 "dialog node": "node 7 1590338716804",
 "previous_sibling": "Welcome"
},
 "type": "standard",
 "title": "corona1",
 "output": {
  "generic": [
     "values": [
```

"text": "COVID-19 affects different people in different ways. Most infected people will develop mild to moderate illness and recover without hospitalization.\nMost common symptoms:\nfever\ndry cough\ntiredness\nLess common symptoms:\naches and pains\nsore throat\ndiarrhoea\nconjunctivitis\nheadache\nloss of taste or smell\na rash on skin, or discolouration of fingers or toes\nSerious symptoms:\ndifficulty breathing or shortness of breath\nchest pain or pressure\nloss of speech or movement\nSeek immediate medical attention if you have serious symptoms. Always call before visiting your doctor or health facility.\nPeople with mild symptoms who are otherwise healthy should manage their symptoms at home.\nOn average it takes 5–6 days from when someone is infected with the virus for symptoms to show, however it can take up to 14 days."

```
],
    "response_type": "text",
    "selection_policy": "sequential"
    }
]
},
"conditions": "#basics || @basics:symptoms",
"dialog_node": "node_9_1590498718865",
"previous_sibling": "node_1_1590498581073"
},
{
    "type": "standard",
    "title": "thanks",
    "output": {
```

```
"generic": [
       "values": [
          "text": "Happy to help."
       "response_type": "text",
       "selection_policy": "sequential"
    ]
   },
   "conditions": "#thanks",
   "digress_in": "does_not_return",
   "dialog node": "node 4 1590422057790",
   "previous_sibling": "node_6_1590577304067"
  },
   "type": "standard",
   "title": "social distancing",
   "output": {
     "generic": [
       "values": [
          "text": "Social distancing is a non-pharmaceutical infection prevention and control
intervention implemented to avoid/decrease contact between those who are infected with a
disease causing pathogen and those who are not, so as to stop or slow down the rate and
extent of disease transmission in a community. This eventually leads to decrease in spread,
morbidity and mortality due to the disease."
        }
       ],
       "response_type": "text",
       "selection policy": "sequential"
      }
    ]
   "conditions": "#socialdistancing | @socialdistancing:(social distancing)",
   "dialog_node": "node_6_1590511015209",
   "previous_sibling": "node_10_1590510793568"
   "type": "standard",
   "title": "china",
   "output": {
     "generic": [
```

```
"values": [
```

"text": "In general, because of poor survivability of these coronaviruses on surfaces, there is likely very low risk of spread from products or packaging that are shipped over a period of days or weeks at ambient temperatures. Coronaviruses are generally thought to be spread most often by respiratory droplets. Currently there is no evidence to support transmission of COVID-19 associated with imported goods and there have not been any cases of COVID-19 in the United States associated with imported goods. Information will be provided on the Coronavirus Disease 2019 (COVID-19) website as it becomes available."

"text": "Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus.\nMost people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.\nThe best way to prevent and slow down transmission is be well informed about the COVID-19 virus, the disease it causes and how it spreads. Protect yourself and others from infection by washing your hands or using an alcohol based rub frequently and not touching your face. \nThe COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it's important that you also practice respiratory etiquette (for example, by coughing into a flexed elbow). At this time, there are no specific vaccines or treatments for COVID-19. However, there are many ongoing clinical trials evaluating potential treatments. WHO will continue to provide updated information as soon as clinical findings become available."

```
}
],
"response_type": "text",
"selection_policy": "sequential"
```

```
]
   },
   "conditions": "#basics || @basics:origin",
   "dialog_node": "node_1_1590498581073",
   "previous_sibling": "node_7_1590338716804"
  },
   "type": "standard",
   "title": "news",
   "actions": [
      "name": "main_webhook",
      "type": "webhook",
      "parameters": {
       "type": "api",
       "country": "US"
      "result_variable": "webhook_result_1"
   "metadata": {
     "_customization": {
      "mcr": true
   },
   "conditions": "#news || @news",
   "dialog_node": "node_6_1590577304067",
   "previous_sibling": "node_6_1590511740038"
  },
   "type": "standard",
   "title": "treatment",
   "output": {
     "generic": [
       "values": [
          "text": "As of now there is no cure for coronavirus. Clinical trials are going on to find a
vaccine. Different countries are using different drugs to treat the virus. Different anti-viral and
anti-malarial drugs are being used. Some countries are also considering plasma therapy as a
treatment option."
        }
       "response_type": "text",
       "selection_policy": "sequential"
      }
    ]
```

```
},
   "conditions": "#treatment | @treatment:treatment",
   "dialog_node": "node_8_1590511196226",
   "previous_sibling": "node_3_1590422288467"
   "type": "standard",
   "title": "contagious",
   "output": {
     "generic": [
       "values": [
          "text": "Yes, some coronaviruses can be transmitted from person to person, usually
after close contact with an infected patient, for example, in a household workplace, or health
care centre."
       "response_type": "text",
       "selection_policy": "sequential"
    1
   "conditions": "#contagious",
   "dialog_node": "node_10_1590510793568",
   "previous sibling": "node 2 1590510174132"
   "type": "standard",
   "title": "wash hands",
   "output": {
     "generic": [
       "values": [
```

"text": "You should wash your hands for at least 20-30 seconds. An easy way to time it is by singing the full happy birthday song, twice.\nThe same goes for hand sanitizer: use a sanitizer that contains at least 60% alcohol and rub it into your hands for at least 20 seconds to ensure full coverage.\nIn the context of COVID-19 prevention, you should make sure to wash your hands at the following times:\nAfter blowing your nose, coughing or sneezing\nAfter visiting a public space, including public transportation, markets and places of worship\nAfter touching surfaces outside of the home, including money\nBefore, during and after caring for a sick person\nBefore and after eating\nIn general, you should always wash your hands at the following times:\nAfter using the toilet\nBefore and after eating\nAfter handling garbage\nAfter touching animals and pets\nAfter changing babies' diapers or helping children use the toilet\nWhen your hands are visibly dirty \nTo eliminate all traces of the virus on your hands, a quick scrub and a rinse won't cut it. Below is a step-by-step process for effective

handwashing.\nStep 1: Wet hands with running water\nStep 2: Apply enough soap to cover wet hands\nStep 3: Scrub all surfaces of the hands – including back of hands, between fingers and under nails – for at least 20 seconds.\nStep 4: Rinse thoroughly with running water\nStep 5: Dry hands with a clean cloth or single-use towel"

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}
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       },
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 "name": "My first skill",
 "language": "en",
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}
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## 12.REFERENCE

https://cloud.ibm.com/docs

https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.ibm.com/inen/cloud/get-

started&ved=2ahUKEwim59LdrdrpAhX463MBHbggCyYQFjAAegQlChAB&usg=AOvVaw3qonl49TchgnXePgxQTNlu&cshid=1590799449065