

SMART RESTAURANT BOT

INTRODUCTION

In this project, I am using a chatbot which is similar to a conversation between a customer and a waiter in a restaurant. Services which are used are:-

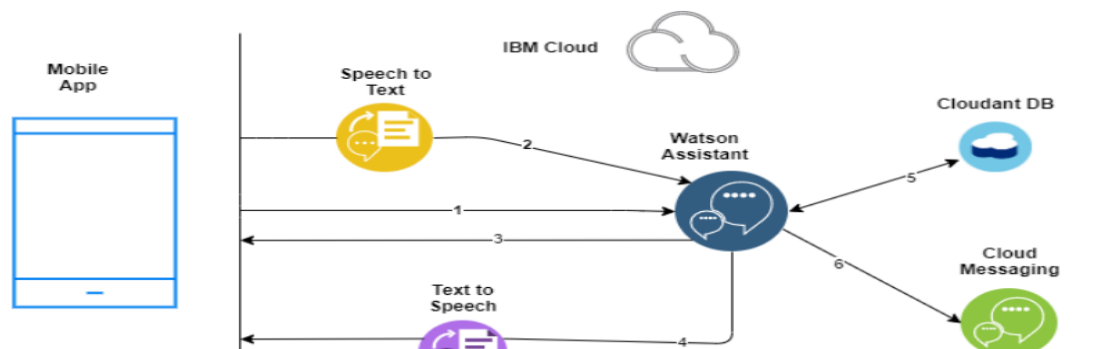
- 1) Watson Assistant
- 2) Node-red
- 3) Text-to-Speech
- 4) Speech-to-Text
- 5) Cloudant-db

In this particular bot, we can place orders, know the menu, offers and special items. We can place an order for a maximum of 3 items and can pay the bill either through UPI, Direct Cash or Card.

LITERATURE SURVEY

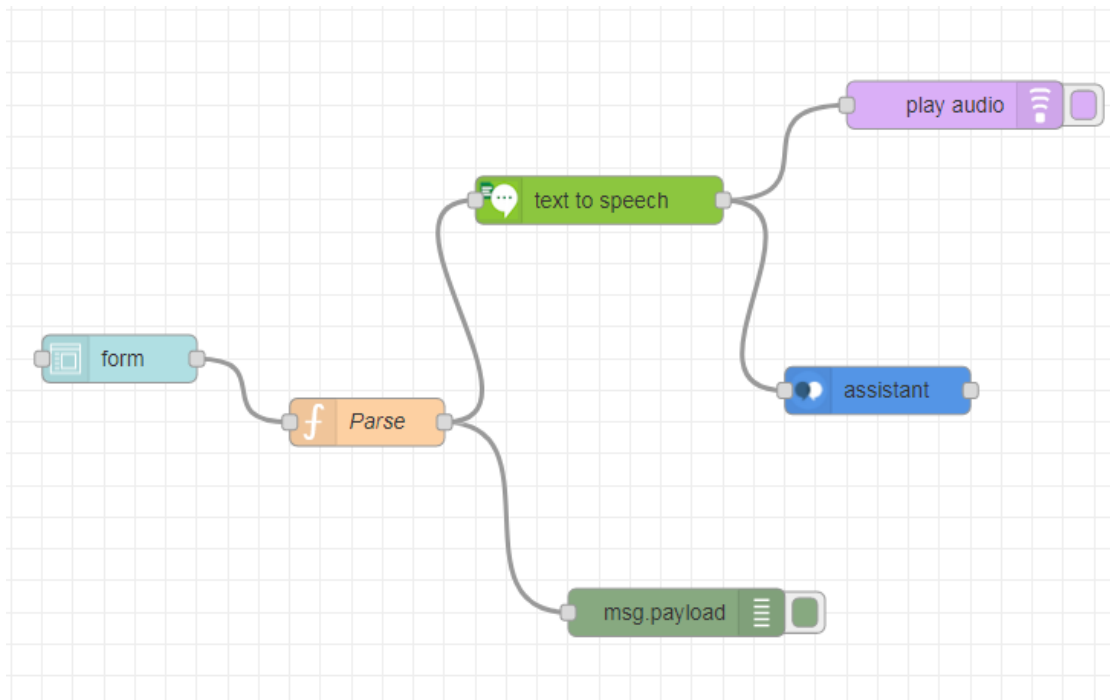
In the current scenario of Covid-19, people are not able to freely go to a restaurant and place an order or buy something. Due to this, there is a huge problem suffering by the workers in a particular restaurant as they are not getting their income correctly. So, in this solution, the customers can place their orders through the restaurant's website and can pay either through online or at the time of delivery. So, in this way people can avoid physical contacts. This also makes them feel that they are in a restaurant and communicating with a particular waiter or employee.

THEORETICAL ANALYSIS

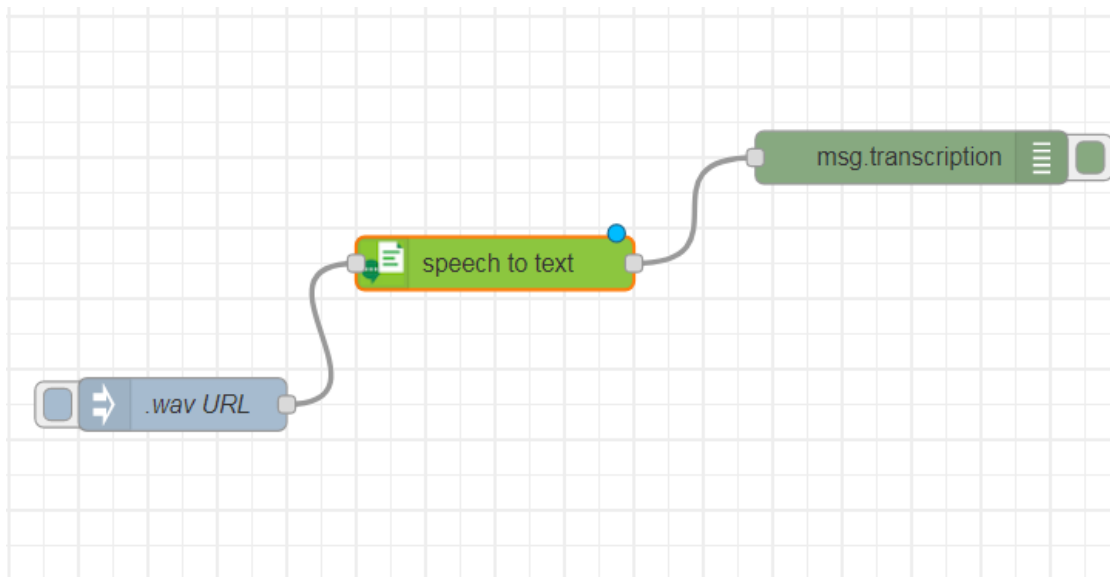


FLOWCHART

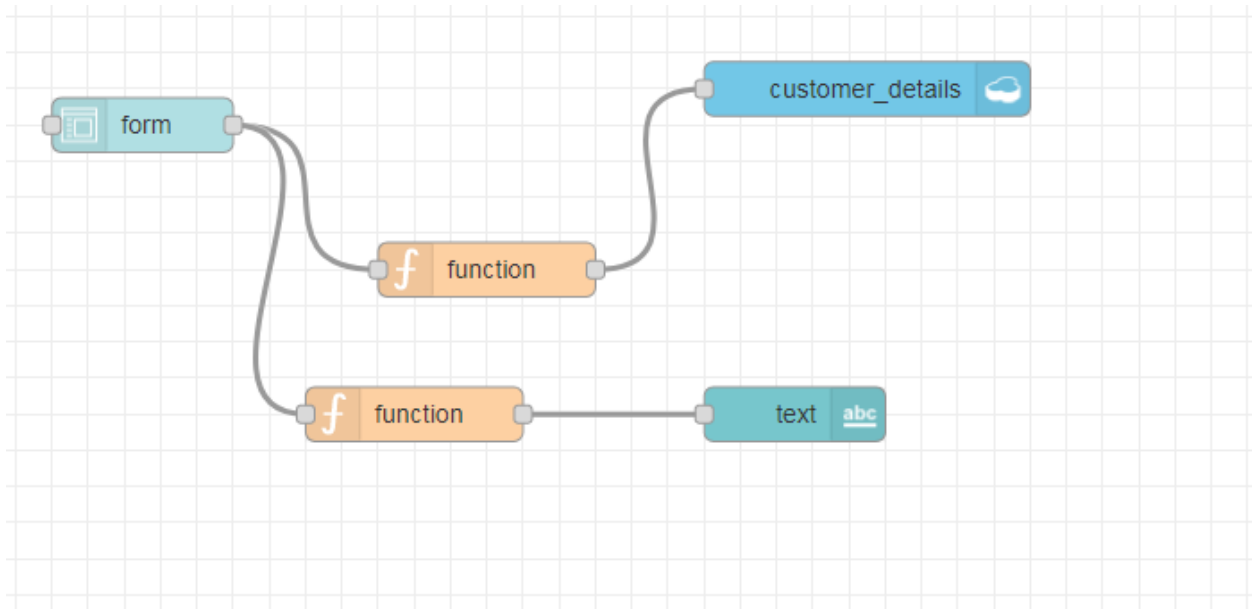
Text-to-Speech



Speech-to-Text



Cloudant-DB



RESULT

The restaurant chatbot is designed and which asks for the customer's feedback. The feedback is stored in the cloudant-db.

ADVANTAGES AND DISADVANTAGES

ADVANTAGES

- *Cost Savings.
- *Improved Customer Service.
- *Avoidance of physical contacts.

DISADVANTAGES

- *Not able to solve complex queries.
- *Difficult to create.
- *In this particular restaurant chatbot, a customer can order a maximum of 3 items.

APPLICATIONS

Chatbots can be used in many areas when natural disasters arise. It will save the cost of travel etc. for the customers. They mimic written or spoken human speech for the purposes of simulating a conversation or interaction with a real person.

CONCLUSION

In today's scenario of covid-19, to avoid going outside of our home, we can use these types of chatbots for live interaction with the waiter. The customers can place their orders through the restaurant's website and can pay either through online or at the time of delivery.

FUTURE SCOPE

We can implement the text-to-speech, speech-to-text functionality to convert the text responses (or speech responses) to speech (or text) format for better comfort for the users. Implementing a system in which the bot will also display the total price for the items we have ordered will make the bot more fascinating.

PREVIEW LINK

<https://web-chat.global.assistant.watson.cloud.ibm.com/preview.html?region=us-south&integrationID=495f0181-750c-4f08-8266-17745471cbb4&serviceInstanceID=5d0de2d5-6045-4d7c-95b9-254cb68bc81d>

RECORDING

<https://drive.google.com/file/d/1ifmjTihgOJBcs1-vSsduHBE5UMaprCme/view?usp=sharing>

BIBLIOGRAPHY

- <https://smartinternz.com/Student/project/8034#>

APPENDIX

A.SOURCE CODE

TEXT-TO-SPEECH

```
[
  {
    "id": "5b54854f.973e2c",
    "type": "tab",
    "label": "Flow 2",
    "disabled": false,
    "info": ""
  },
  {
    "id": "22fe91d3.65e12e",
```

```

    "type": "watson-text-to-speech",
    "z": "5b54854f.973e2c",
    "name": "",
    "lang": "en-GB",
    "langhidden": "en-GB",
    "langcustom": "NoCustomisationSetting",
    "langcustomhidden": "",
    "voice": "en-GB_CharlotteV3Voice",
    "voicehidden": "",
    "format": "audio/wav",
    "password": "",
    "apikey": "pochYWXwzZKzIVOYbxFz7vNldb00b1g8eu0f_v0Z7O6s",
    "payload-response": false,
    "service-endpoint":
    "https://api.us-south.text-to-speech.watson.cloud.ibm.com/instances/76571061-98c0-4df8-bc65-b2e88b
    bf9767",
    "x": 420,
    "y": 160,
    "wires": [
      [
        "dcd46106.cf7e6",
        "f7a99b4b.709b18"
      ]
    ]
  },
  {
    "id": "dcd46106.cf7e6",
    "type": "play audio",
    "z": "5b54854f.973e2c",
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    "voice": "",
    "x": 650,
    "y": 100,
    "wires": []
  },
  {
    "id": "553283f0.b9348c",
    "type": "ui_form",
    "z": "5b54854f.973e2c",
    "name": "",
    "label": "",
    "group": "68c7fb7d.730714",
    "order": 0,
    "width": 0,
    "height": 0,
    "options": [
      {
        "label": "Enter the text",
        "value": "t",
        "type": "text",

```

```

        "required": true,
        "rows": null
    }
],
"formValue": {
    "t": ""
},
"payload": "",
"submit": "submit",
"cancel": "cancel",
"topic": "",
"x": 110,
"y": 260,
"wires": [
    [
        "3ad1036e.9f595c"
    ]
]
},
{
    "id": "48c6b28e.3e9b2c",
    "type": "debug",
    "z": "5b54854f.973e2c",
    "name": "",
    "active": true,
    "tosidebar": true,
    "console": false,
    "tostatus": false,
    "complete": "false",
    "statusVal": "",
    "statusType": "auto",
    "x": 470,
    "y": 420,
    "wires": []
},
{
    "id": "3ad1036e.9f595c",
    "type": "function",
    "z": "5b54854f.973e2c",
    "name": "Parse",
    "func": "msg.payload=msg.payload.t\\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "initialize": "",
    "finalize": "",
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    "y": 300,
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```

```

        "22fe91d3.65e12e"
    ]
}
{
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    "type": "watson-conversation-v1",
    "z": "5b54854f.973e2c",
    "name": "",
    "workspaceid": "542bf17f-09c6-46d6-8b0c-a964958df910",
    "multiuser": false,
    "context": true,
    "empty-payload": false,
    "service-endpoint":
"https://api.us-south.assistant.watson.cloud.ibm.com/instances/5d0de2d5-6045-4d7c-95b9-254cb68bc8
1d",
    "timeout": "",
    "optout-learning": false,
    "x": 600,
    "y": 280,
    "wires": [
        []
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},
{
    "id": "68c7fb7d.730714",
    "type": "ui_group",
    "z": "",
    "name": "Text to Speech",
    "tab": "cb2643a6.e603d",
    "order": 1,
    "disp": true,
    "width": "6",
    "collapse": false
},
{
    "id": "cb2643a6.e603d",
    "type": "ui_tab",
    "z": "",
    "name": "Enter text",
    "icon": "dashboard",
    "disabled": false,
    "hidden": false
}
]

```

SPEECH-TO-TEXT

```

[
    {
        "id": "bdb9232c.76a8",

```

```

    "type": "watson-speech-to-text",
    "z": "6a8e84dc.f96f4c",
    "name": "",
    "alternatives": 1,
    "speakerlabels": true,
    "smartformatting": false,
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    "langhidden": "",
    "langcustom": "",
    "langcustomhidden": "",
    "custom-weight": "0.5",
    "band": "",
    "bandhidden": "",
    "keywords": "",
    "keywords-threshold": "0.5",
    "word-confidence": false,
    "password": "",
    "apikey": "",
    "payload-response": false,
    "streaming-mode": false,
    "streaming-mute": true,
    "auto-connect": false,
    "discard-listening": false,
    "disable-precheck": false,
    "service-endpoint": "",
    "x": 320,
    "y": 180,
    "wires": [
      [
        "6554092e.91c548"
      ]
    ]
  }
]

```

CLOUDANT-DB

```

[
  {
    "id": "d28a2ff8.90828",
    "type": "tab",
    "label": "Cloudant",
    "disabled": false,
    "info": ""
  },
  {
    "id": "b1046757.519648",
    "type": "ui_form",
    "z": "d28a2ff8.90828",
    "name": "",
    "label": "",

```



```
"group": "eb4828f6.f71b78",
"order": 0,
"width": 0,
"height": 0,
"options": [
  {
    "label": "Enter name",
    "value": "name",
    "type": "text",
    "required": true,
    "rows": null
  },
  {
    "label": "Enter email",
    "value": "email",
    "type": "email",
    "required": true,
    "rows": null
  },
  {
    "label": "Enter password",
    "value": "password",
    "type": "password",
    "required": true,
    "rows": null
  },
  {
    "label": "Enter Phoneno",
    "value": "phoneno",
    "type": "number",
    "required": true,
    "rows": null
  },
  {
    "label": "Enter query",
    "value": "query",
    "type": "text",
    "required": true,
    "rows": null
  }
],
"formValue": {
  "name": "",
  "email": "",
  "password": "",
  "phoneno": "",
  "query": ""
},
"payload": "",
"submit": "submit",
```

```

    "cancel": "cancel",
    "topic": "",
    "x": 190,
    "y": 100,
    "wires": [
      [
        "2649960e.a4457a",
        "ba6cd1.d972f33"
      ]
    ]
  },
  {
    "id": "d26ae50a.57fe88",
    "type": "cloudant out",
    "z": "d28a2ff8.90828",
    "name": "",
    "cloudant": "",
    "database": "customer_details",
    "service": "node-red-zfehs-2020--cloudant-1608276037343-72822",
    "payonly": true,
    "operation": "insert",
    "x": 590,
    "y": 80,
    "wires": []
  },
  {
    "id": "2649960e.a4457a",
    "type": "function",
    "z": "d28a2ff8.90828",
    "name": "",
    "func": "msg.payload = {\n  _id:msg.payload.email,\n  Name:msg.payload.name,\n  Email:msg.payload.email,\n  Password:msg.payload.password,\n  PhoneNo:msg.payload.phoneno,\n  Query:msg.payload.query\n}\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "initialize": "",
    "finalize": "",
    "x": 380,
    "y": 180,
    "wires": [
      [
        "d26ae50a.57fe88"
      ]
    ]
  },
  {
    "id": "ba6cd1.d972f33",
    "type": "function",
    "z": "d28a2ff8.90828",
    "name": "",

```

```

"func": "msg.payload=\"Thankyou \"+msg.payload.name+\" for your feedback.\\\"\\nreturn msg;\",
"outputs": 1,
"noerr": 0,
"initialize": "",
"finalize": "",
"x": 340,
"y": 260,
"wires": [
  [
    "22437fcf.80d4b"
  ]
]
},
{
  "id": "22437fcf.80d4b",
  "type": "ui_text",
  "z": "d28a2ff8.90828",
  "group": "eb4828f6.f71b78",
  "order": 1,
  "width": 0,
  "height": 0,
  "name": "",
  "label": "",
  "format": "{{msg.payload}}",
  "layout": "row-spread",
  "x": 550,
  "y": 260,
  "wires": []
},
{
  "id": "eb4828f6.f71b78",
  "type": "ui_group",
  "z": "",
  "name": "Customer details",
  "tab": "755836b2.1d8f78",
  "order": 1,
  "disp": true,
  "width": "6",
  "collapse": false
},
{
  "id": "755836b2.1d8f78",
  "type": "ui_tab",
  "z": "",
  "name": "Feedback",
  "icon": "dashboard",
  "disabled": false,
  "hidden": false
}
]

```

