6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Sprint planning is an event in scrum that kicks off the sprint. The purpose of sprint planning is to define what can be delivered in the sprint and how that work will be achieved. Sprint planning is done in collaboration with the whole scrum team. Sprint have splinted into the two or three tasks and each sprint have twenty story points. Sprint tasks are assigned into the team members.

Create IBM Watson assistant service, Chatbot skills creation and Creating saving account action included in the sprint-1. Creating current account action, creating loan account action included in the sprint-2. Creating general queries action, creating Net banking action and Creating assistant & Integrate with flask web using build the python code these are the sprint-3. Build HTML code and Run the applications are sprint-4.

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Create IBM Watson Assistant Service	USN-1	As a user, I can see a Watson Assistant.	8	High	Valliyappan R Kishore S Muthukumar M
Sprint-1	Chatbot Skills Creation	USN-2	As a user, I will see the Chatbot having banking-related skills	7	Medium	Muthukumar M Manikandan G
Sprint-1	Creating Saving Account Action	USN-3	As a user, I can converse with the chatbot regarding saving account-related queries and Action.	5	High	Valliyappan R Manikandan G
Sprint-2	Creating Current Account Action	USN-4	As a user, I can converse with the chatbot regarding current account-related queries and Action.	8	Medium	Valliyappan R Muthukumar M
Sprint-2	Creating Loan Account Action	USN-5	As a user, I can converse with the chatbot regarding loan account-related queries and Action.	12	High	Kishore S Muthukumar M

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3	Creating General Query Action	USN-6	As a user, I can converse with the chatbot regarding general queries and Action.	9	High	Kishore S Manikandan G
Sprint-3	Creating Net Banking Action	USN-7	As a user, I can converse with the chatbot regarding net banking-related queries and Action.	6	Medium	Valliyappan R Muthukumar M
Sprint-3	Creating Assistant & Integrate with Flask Web Page Build Python Code	USN-8	As a user, I can see a flask web page for banking chatbot.	5	High	Kishore S Manikandan G
Sprint-4	Build HTML Code	USN-9	As a user, I can web pages integrated with a chatbot.	5	High	Kishore S Muthukumar M
Sprint-4	Run the Application	USN-10	As a user, I can communicate with the chatbot 24*7 and easy to access.	15	Medium	Kishore S Muthukumar M

6.2 Sprint Delivery Schedule

A sprint schedule is a document that outlines sprint planning from end to end. It's one of the first steps in the agile sprint planning process—and something that requires adequate research, planning, and communication.

All sprint in the total story points twenty then each sprint duration in six days. A sprint-1 start date is 24 October 2022 sprint-1 planned end date for 29 October 2022 the sprint-1 actual release date in 29 October 2022. Next sprint-2 start date is 31 October 2022 sprint-2 planned end date for 05 November 2022 the sprint-2 actual release date in 04 November 2022. Next sprint-3 start date is 07 November 2022 sprint-3 planned end date for 12 November 2022 the sprint-3 actual release date in 11 November 2022. Next sprint-2 start date is 14 November 2022 sprint-4 planned end date for 19 November 2022 the sprint-4 actual release date in 18 November 2022. Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

Sprint	**Total Story Points**	**Duration**	**Sprint Start Date**	**Sprint End Date (Planned)**	**Story Points Completed (as on Planned End Date)**	**Sprint Release Date (Actual)**
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	04 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	11Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	18 Nov 2022

Velocity:

Imagine we have a 6-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

AV = Velocity/Sprint duration

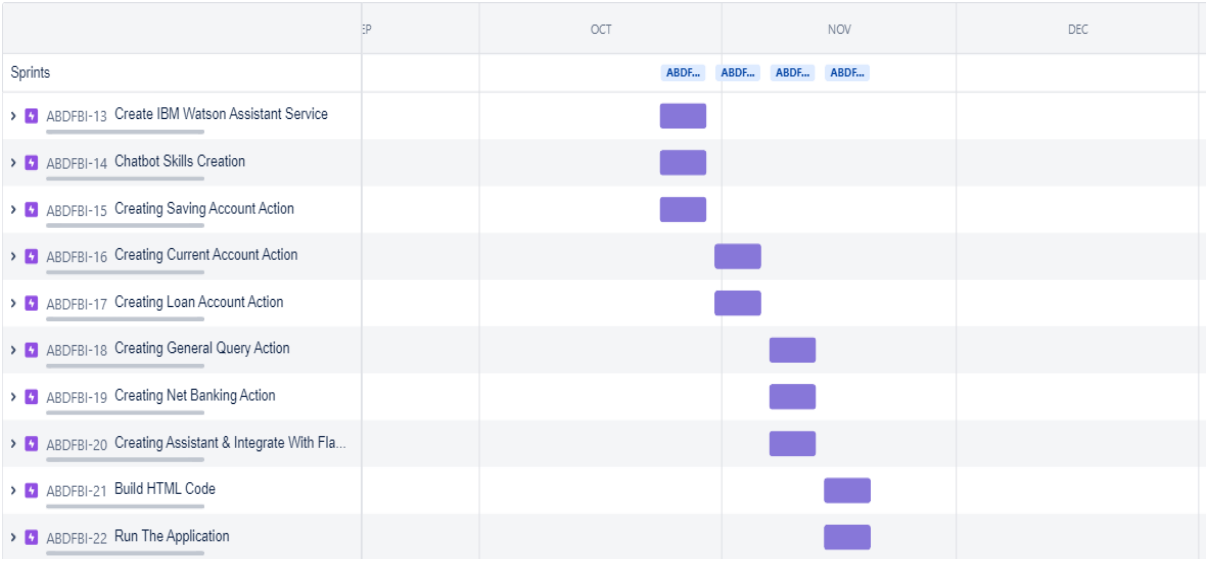
AV = 20/6

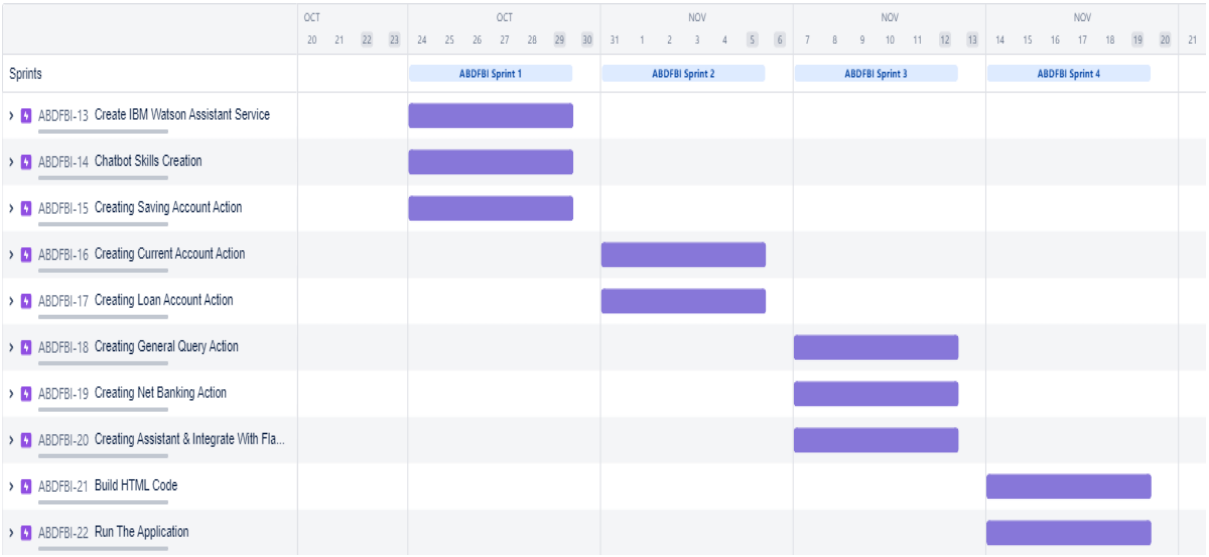
AV =3.34

6.3 Reports From JIRA

Reporting helps you track and analyse your team's work throughout a project. Jira Software has a range of reports that you can use to show information about your project, versions, epics, sprints, and issues.

Create the JIRA account, collaborate the team members and assign the tasks to complete move the in-progress then move the tasks in reviews.





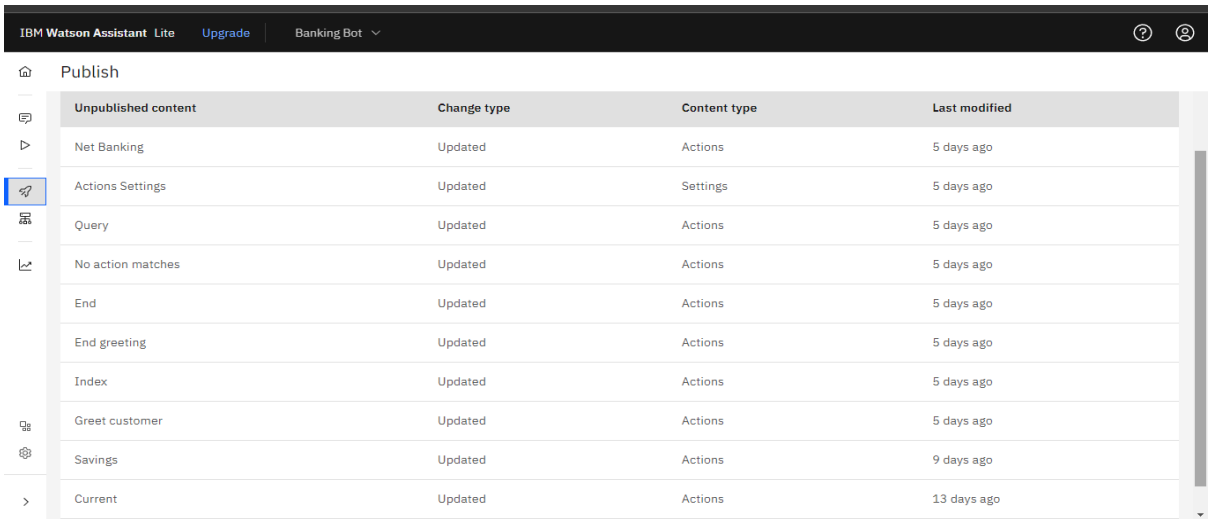
9. RESULTS

9.1 Performance Metrics

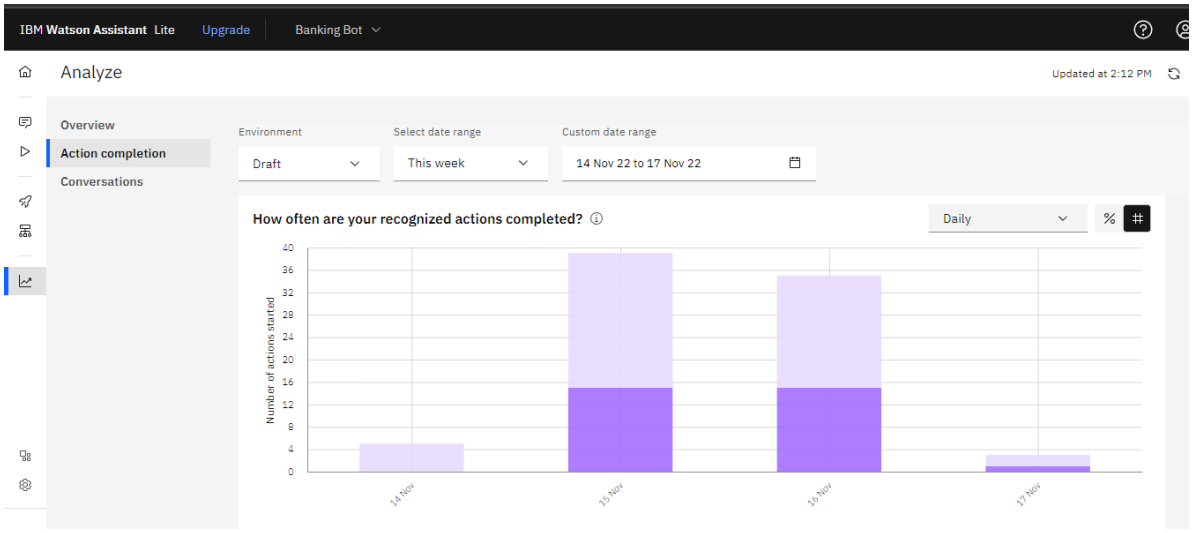
Performance metrics are defined as figures and data representative of an organization's actions, abilities, and overall quality.

Goal Completion Rate (GCR) is on the top of our list because it successfully measures how effective your chatbot actually is, by capturing the percentage of user interactions that have been successful over the chatbot. Your bot essentially exists to answer a customer query, and this metric tells you how effectively your bot processes input and gives a response that answers that customer query satisfactorily. GCR is dependent on how good your Natural Language Processing and Artificial Intelligence Capabilities are.

Conversation Starter Messages Interactions between the bot and the customer is a two-way street, and the number of times the bot initiates the conversation forms the basis for this next metric. Companies need to initiate conversations with customers so that they stay on the website longer, so in a way, conversation starter messages help them bank services. Your conversation starter messages though, they may scare away your potential customers.

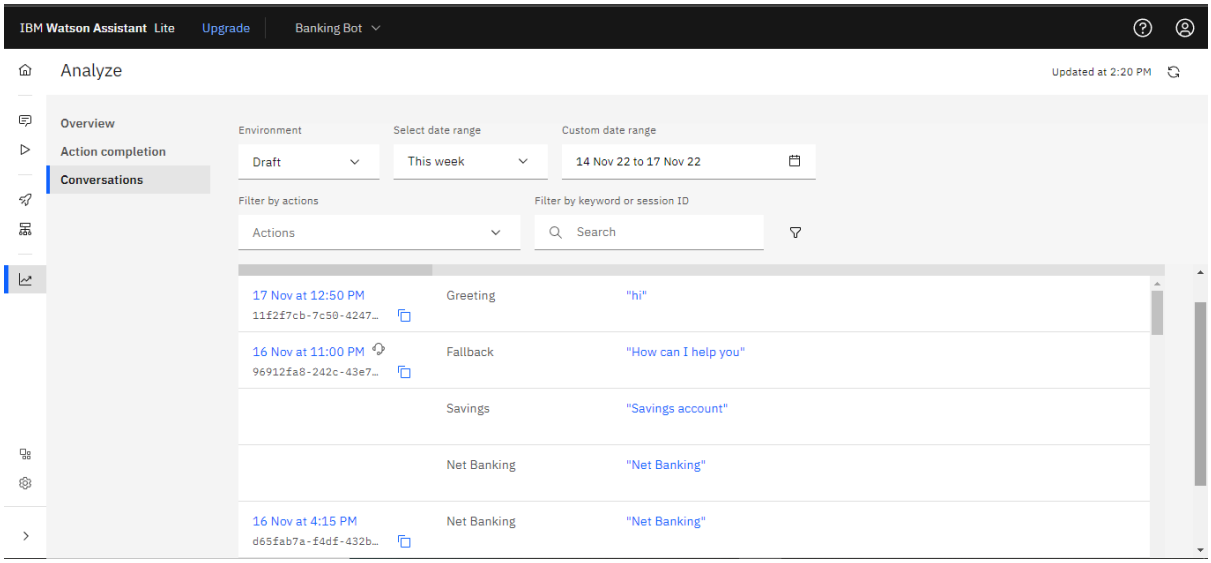


Bot Intent Analytics helps your developers assess how their messages are mapped to specific intent categories. It is a measure of how “smart” your bot currently is and how it can be improved.



Bot Messages is the total number of messages sent by the bot during the course of a conversation forms the basis of this next metric. This metric measures the length of the conversation between the customer and the bot, and we generally want this number to be high. An important caveat to note, we don't want this metric to be high for the wrong reasons, like, for instance, if the bot gives the same answer over and over again to a query it doesn't understand.

A Fall-Back response is one in which the bot does not understand the query from a user and gives a canned response that has been set by the bot designer. The rate of occurrence of this fall-back response is called the fall-back Rate and to effectively design a chatbot, you should know the user messages that trigger these fall-backs. If the chatbot is placed wrongly, then the FBR is bound to go up, or it could also be a fault in the NLP engine if the bot is not able to understand what the user is looking for.



12.FUTURE SCOPE

- Intelligent responses constructed by joining not just the existing list of FAQs but also from numerous other sources like internet, databases and other sources of data
- Providing close suggestions and Intelligent demonstration of response images, links
- Merging semantic similarity along with cosine similarity
- Presentation account related info using Bank’s
- allow users and Artificial Intelligence to communicate naturally and understand complex requests. This would mean that customer service agents would be able to focus on other tasks while the AI takes care of customers' queries.
- Chatbots can be used for various purposes, including addressing common problems, answering customer queries, communicating with employees, and finishing HR-related tasks and transactional functions.

13.APPENDIX

1.Create IBM Service

- Watson Assistant Services

2.Creating Skills & Assistant for Chatbot

i. Chatbot Skill Creation
   - ❖ Greeting
   - ❖ Index
   - ❖ End

ii. Creating Savings Account Action

iii. Creating Current Account Action

iv. Creating Loan Account Action

v. Creating General Query Action

vi. Creating Net Banking Action

3.Creating Assistant & Integrate Flask Web Page

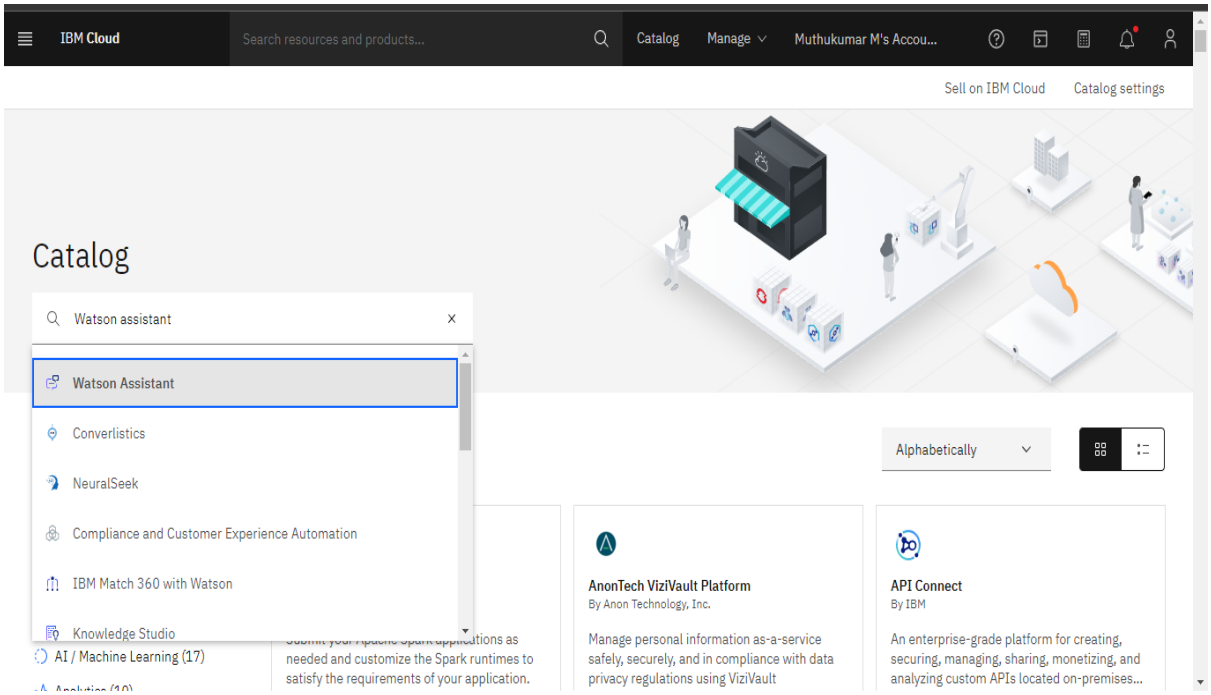
i. Build Python Code

ii. Build Html Code

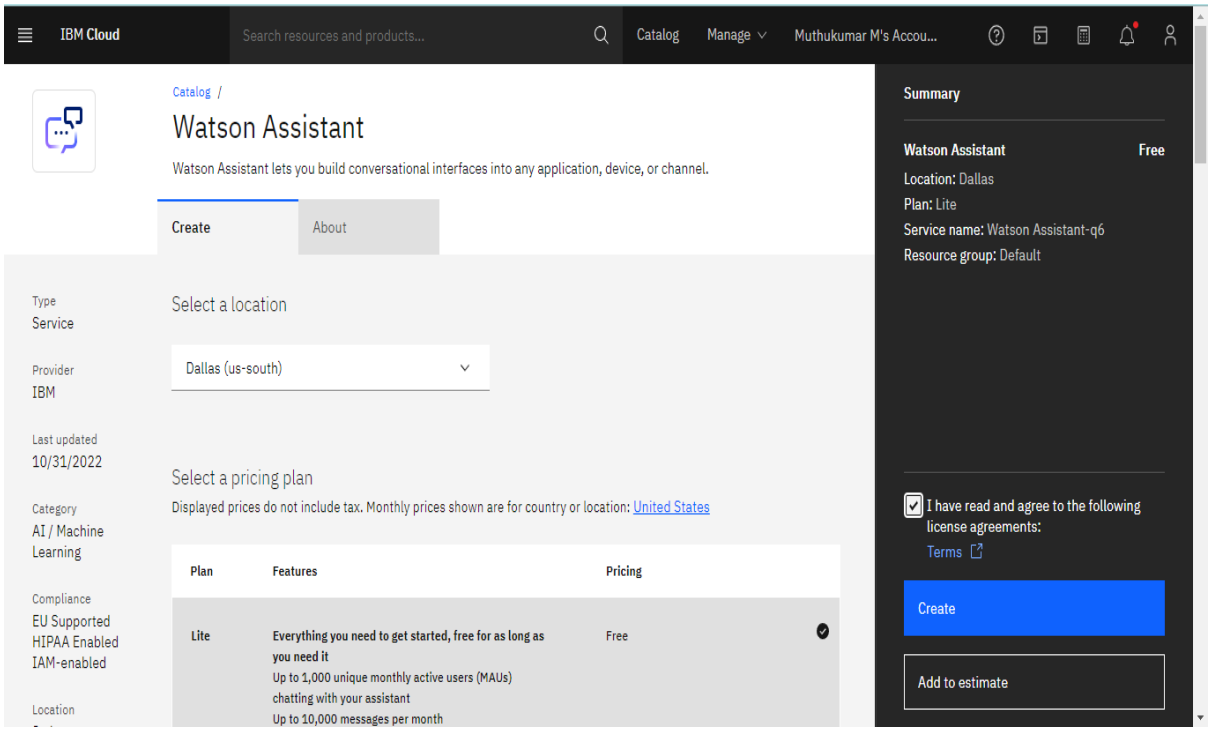
iii. Run the application

1.Create IBM Service

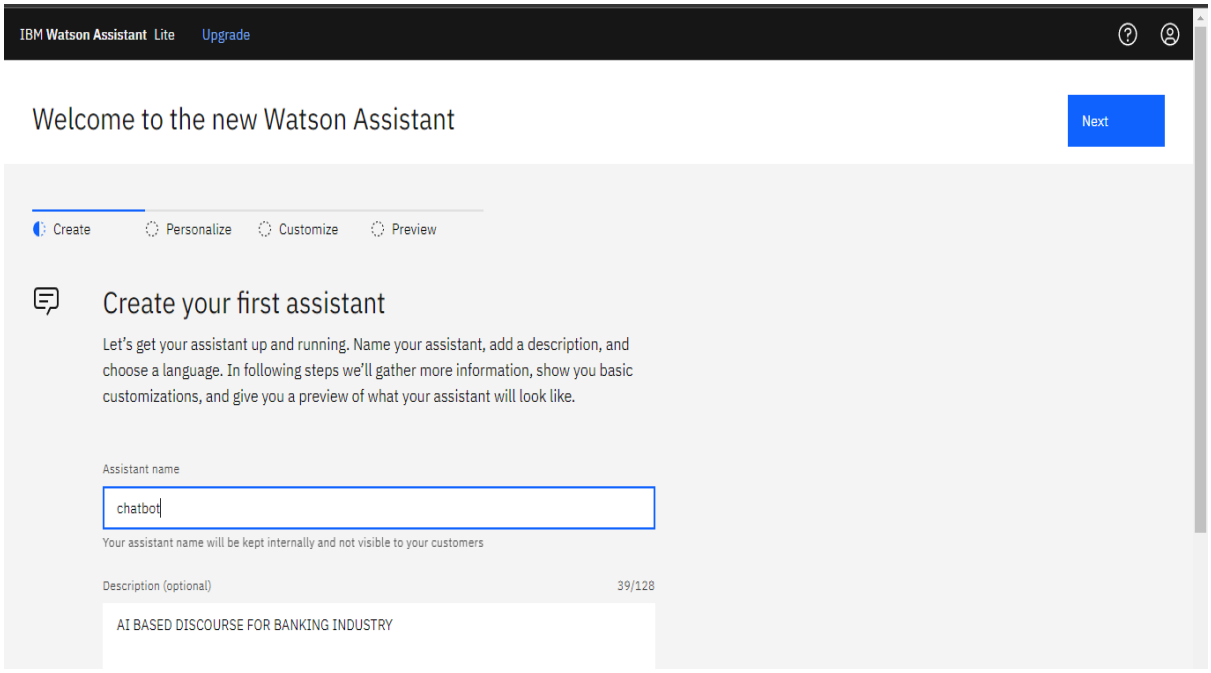
In this activity, you will be creating the necessary IBM service. Creating the Watson Assistant Service. IBM cloud → Open Catalogue →Search the Watson Assistant→ Next choose the Watson Assistant.



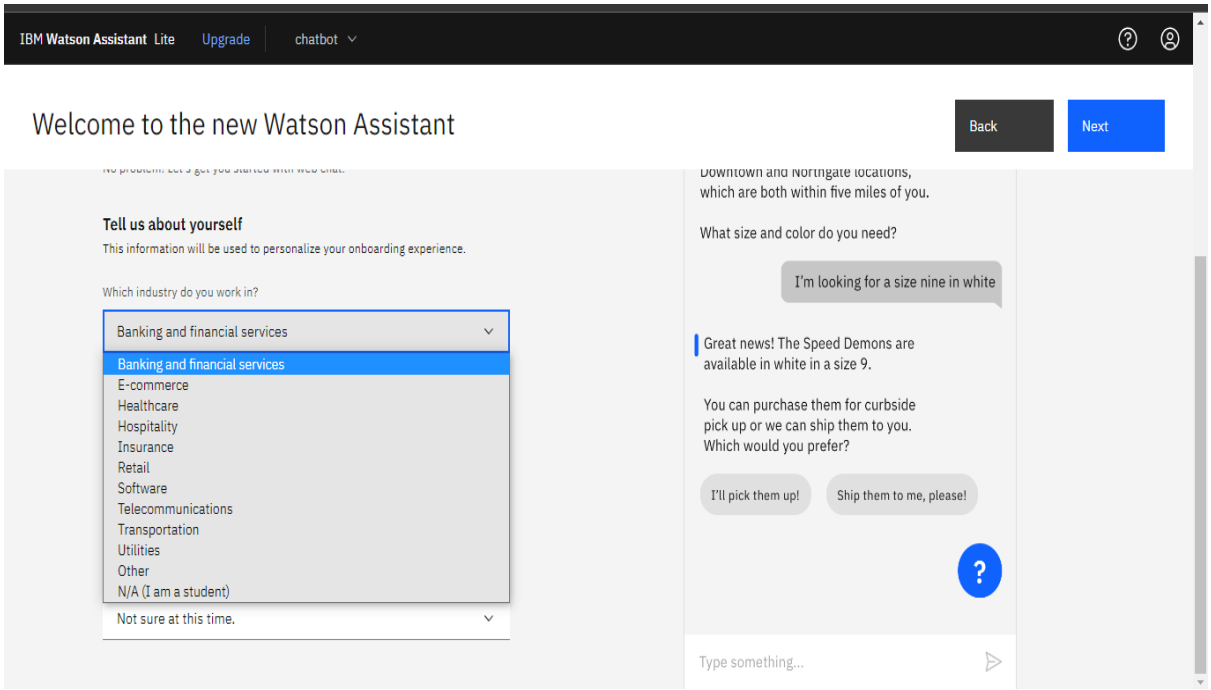
Select a location→ Dallas(US-South) → Click the checkbox and Create the Watson Assistant.



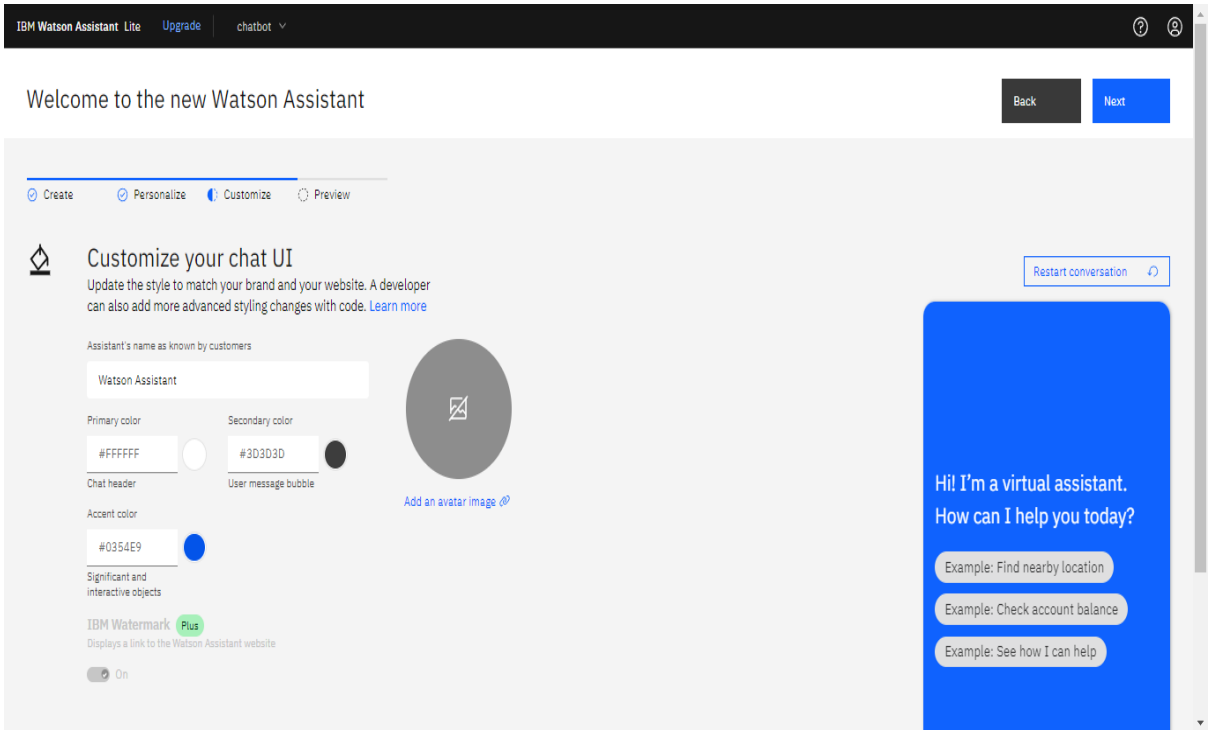
Create the Watson Assistant name& Description→ Click the Next.



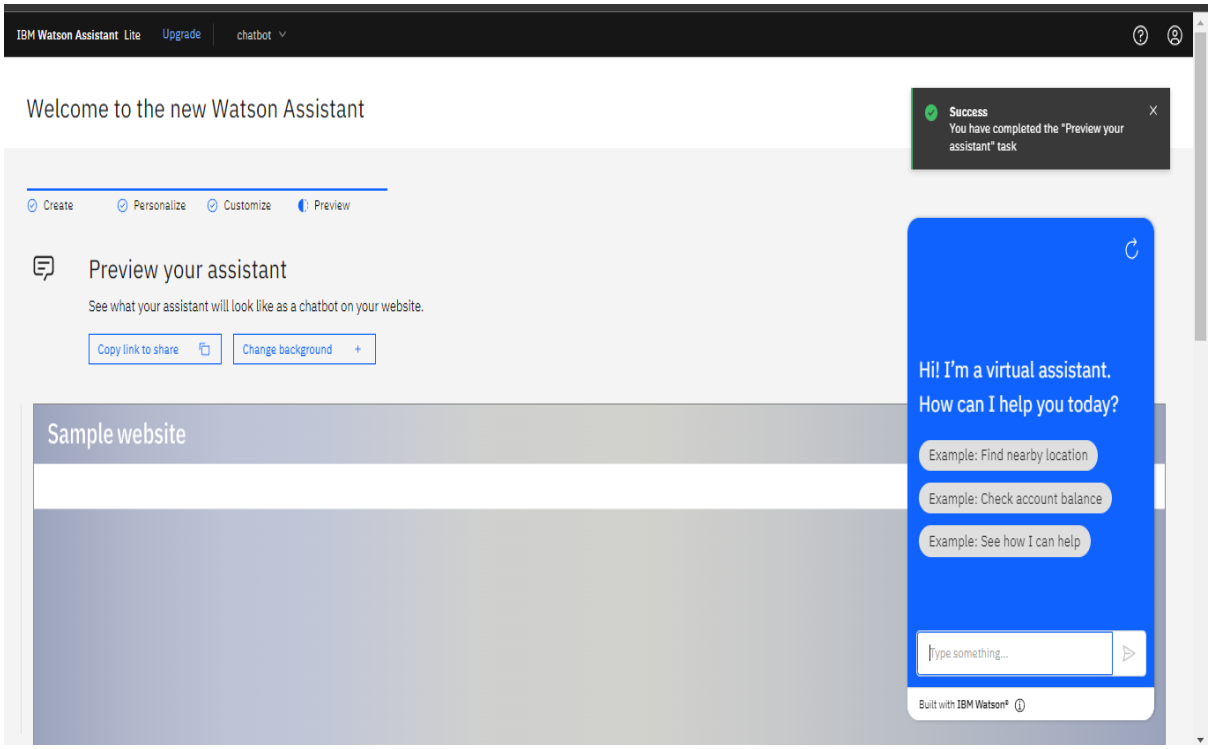
Choose the Industry →Banking and Financial Services & Click the next



Customize the chat UI (Primary, Secondary & Accent Color)→ Next



Watson Assistant service will be created successfully.

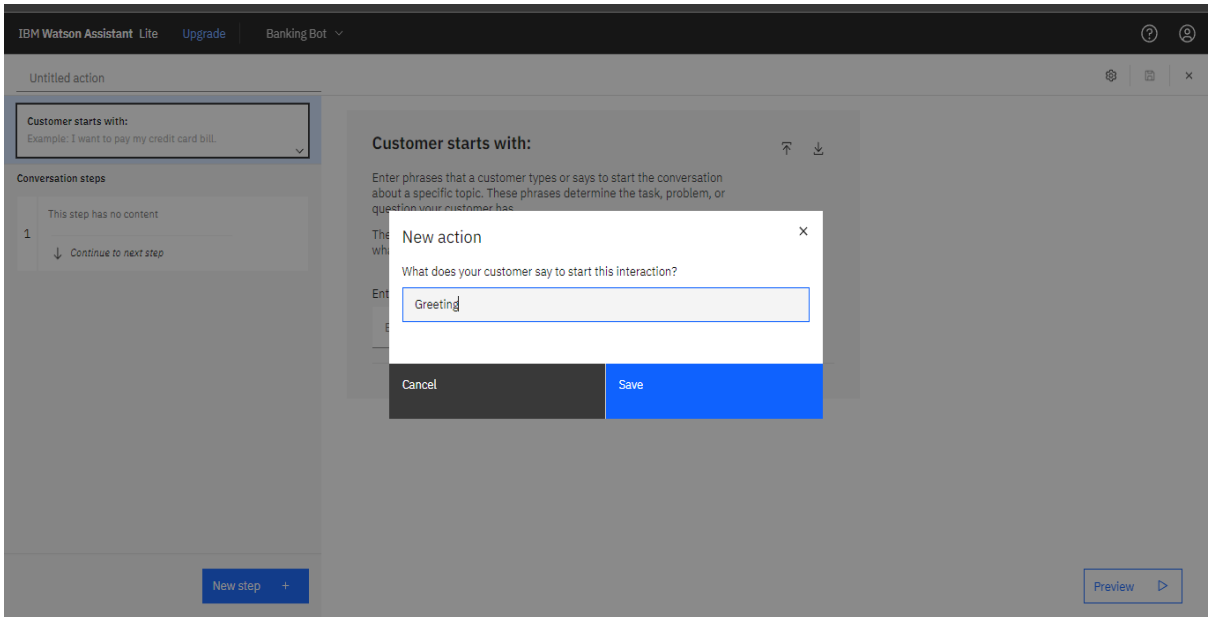


2.Creating Skills & Assistant for Chatbot

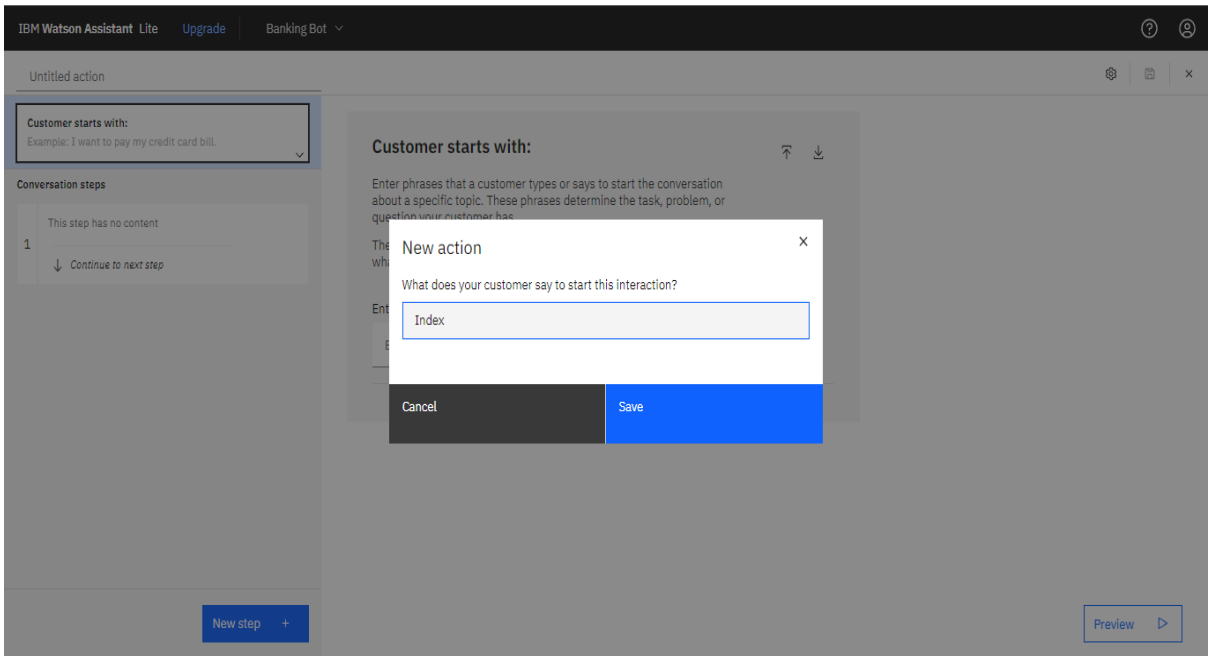
i. Chatbot Skill Creation

- ❖ Greeting
- ❖ Index
- ❖ End

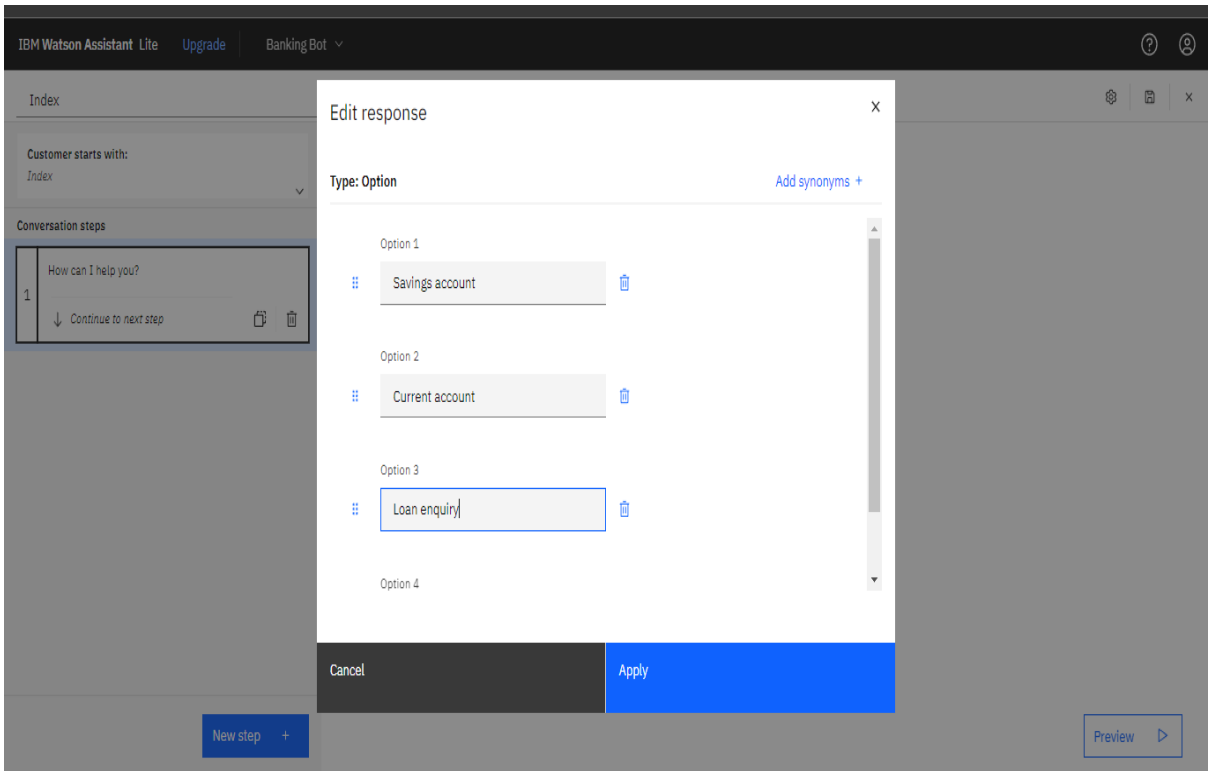
Create the New Action Greeting→Click the save



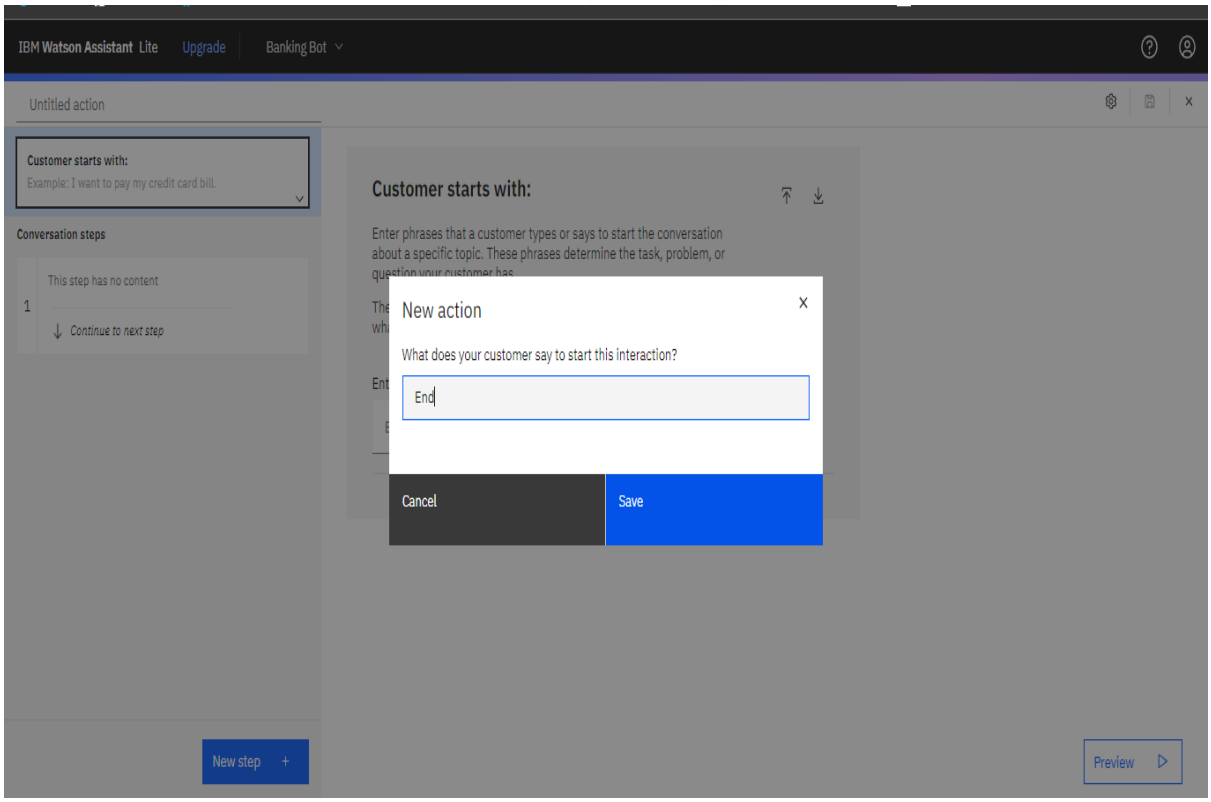
Create the new Action of Index & Click the Save



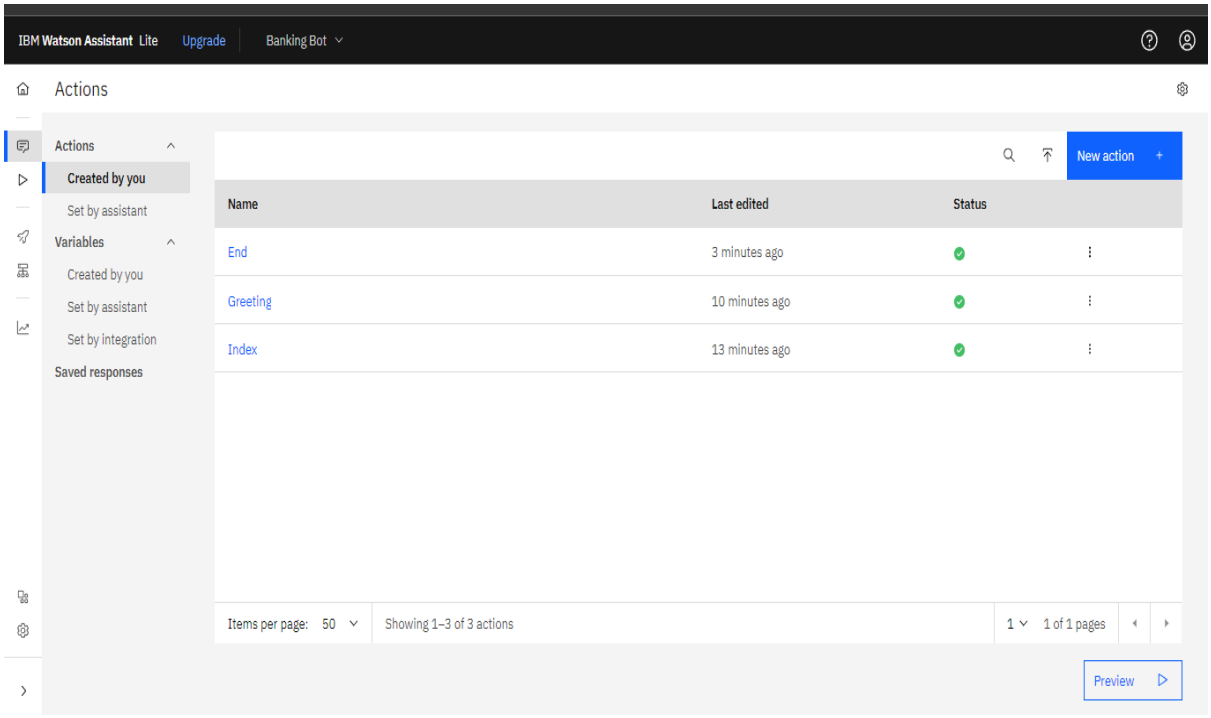
Choose the Define customer Response→ Click the options (Savings account, Current account, Loan enquiry, General query, Net Banking)



Next Create the New Action of End



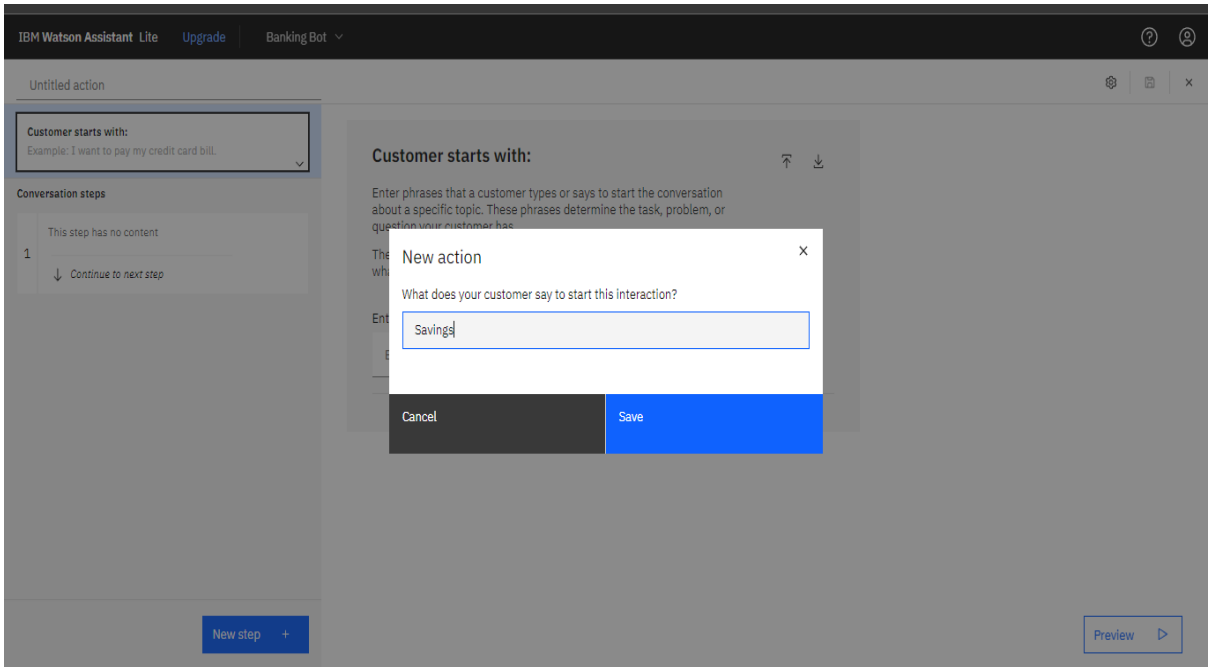
Now you can successfully create the chatbot skills



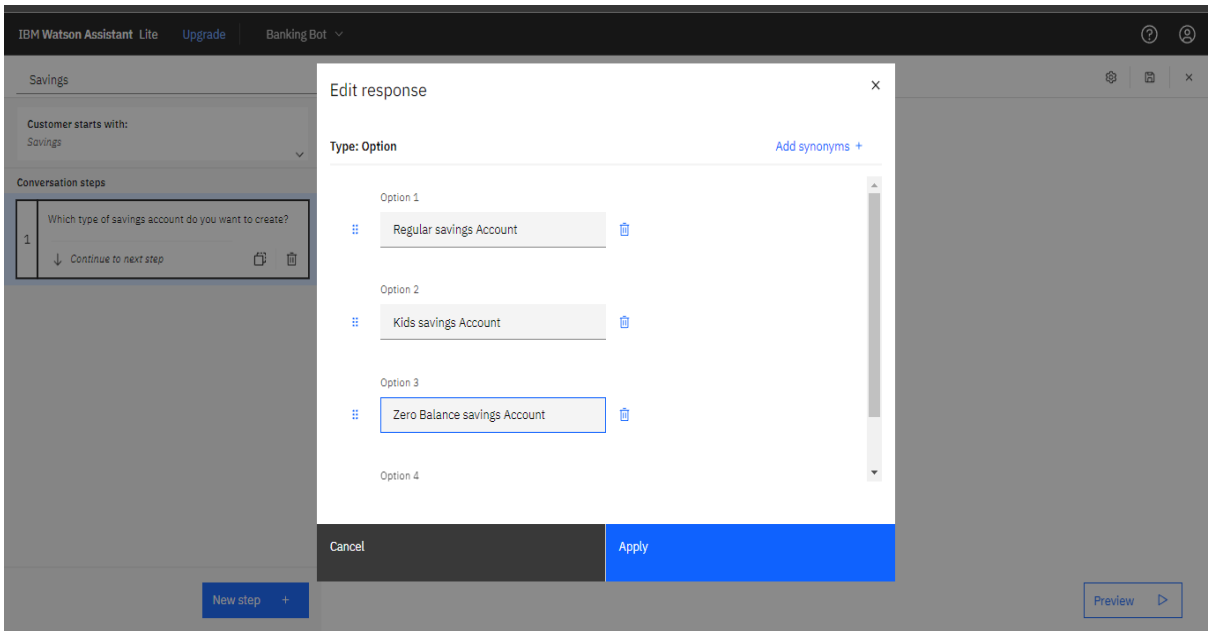
ii. Creating Savings Account Action

- ❖ Regular Savings account
- ❖ Kids savings account
- ❖ Zero Balance Savings account

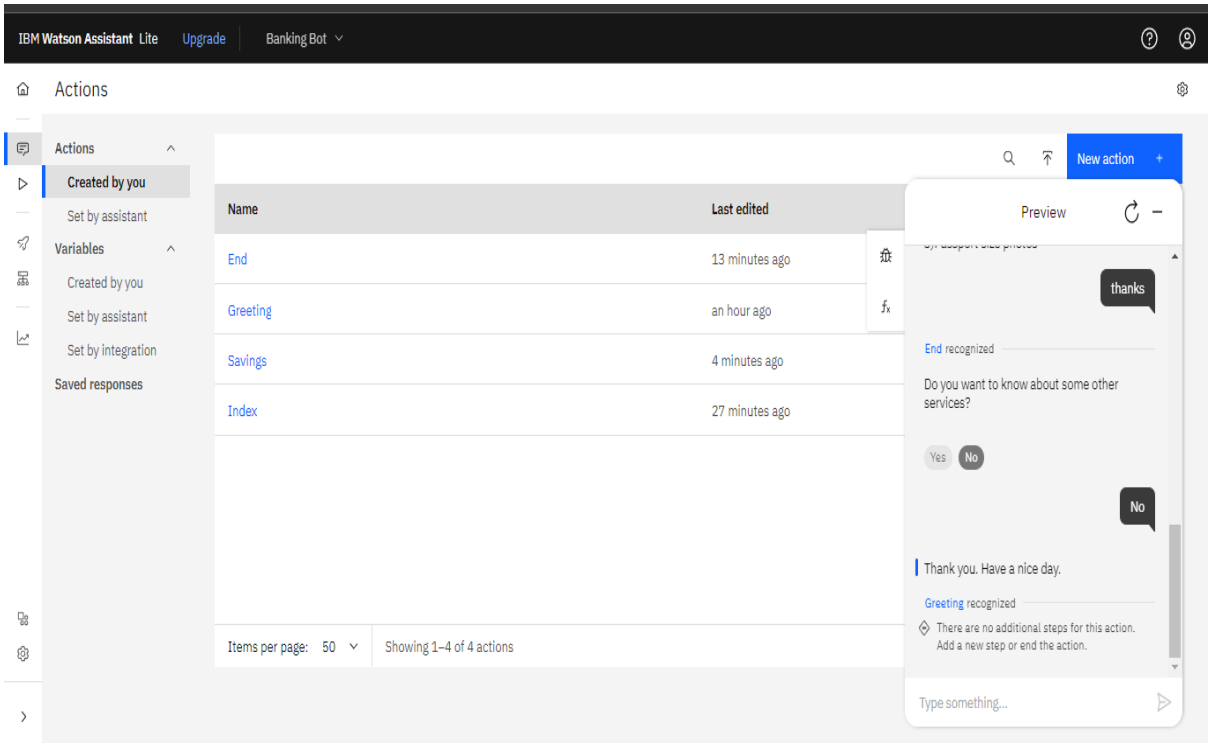
Create the New Action of Savings & Click the Apply.



In go to Savings choose conversation steps 1 in create the Defining Customer Responses & click the option to create the options (Regular, kids & Zero balance savings account).

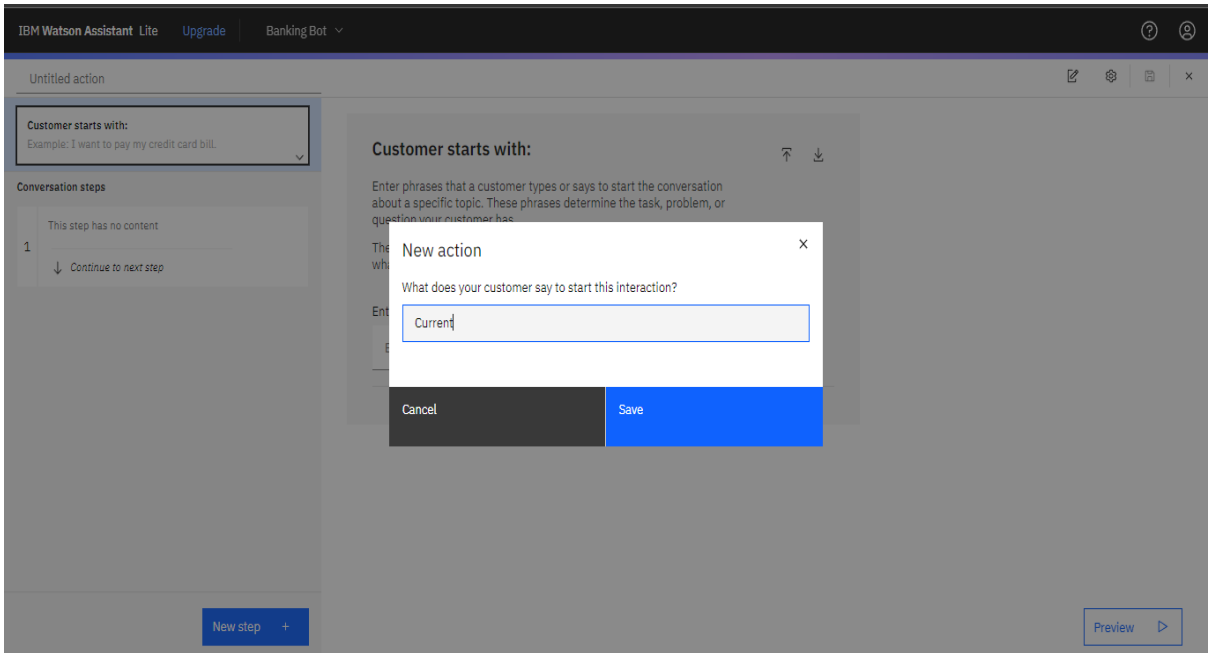


Go to Index click another action to link with the savings in index. Savings Account Actions are Successfully Created.

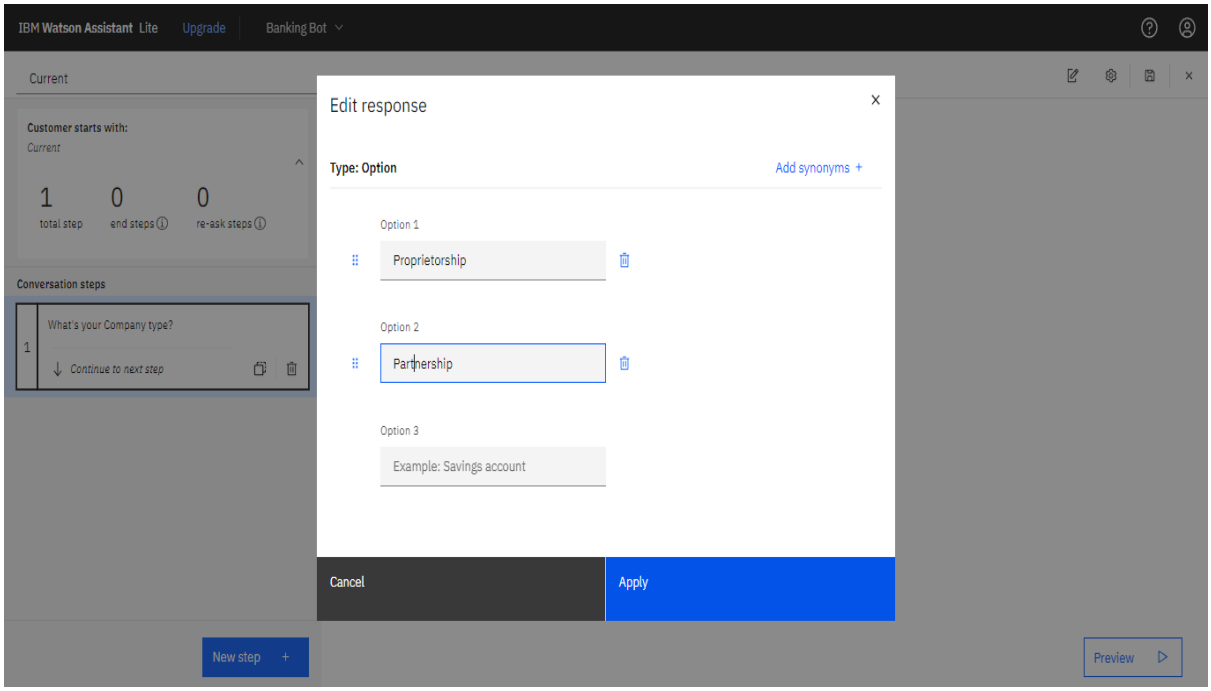


iii. Creating Current Account Action

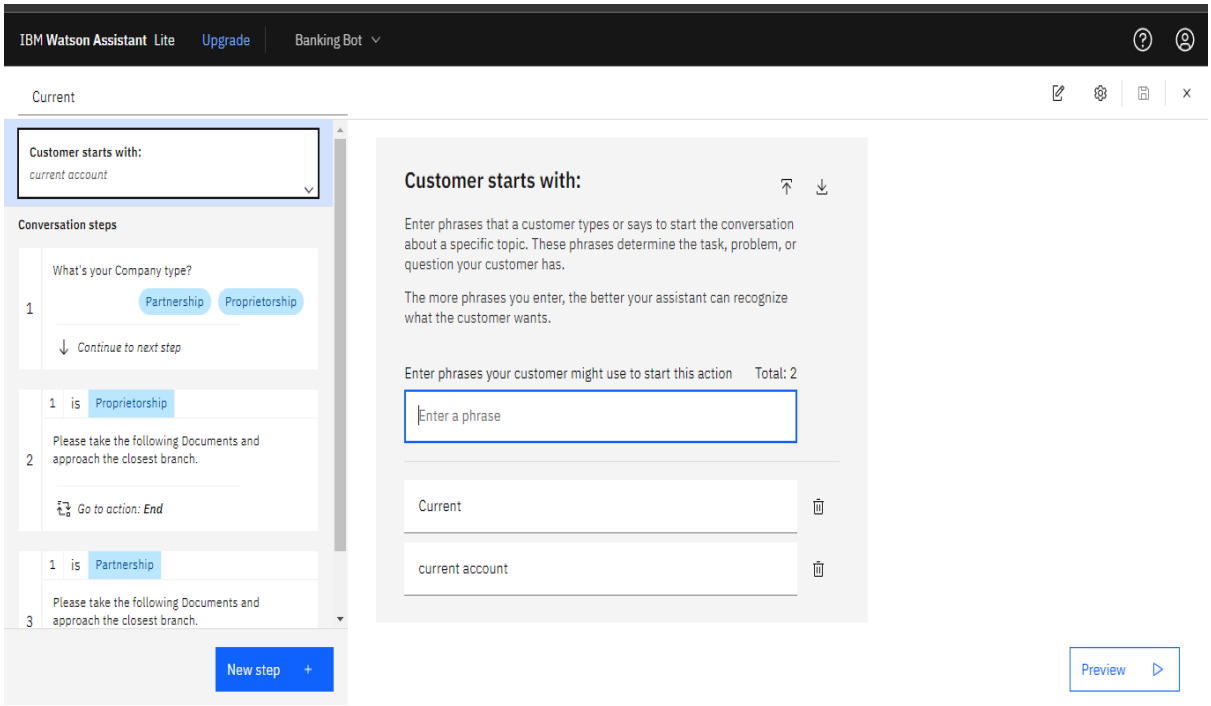
Creating the current account action in the Watson assistant.



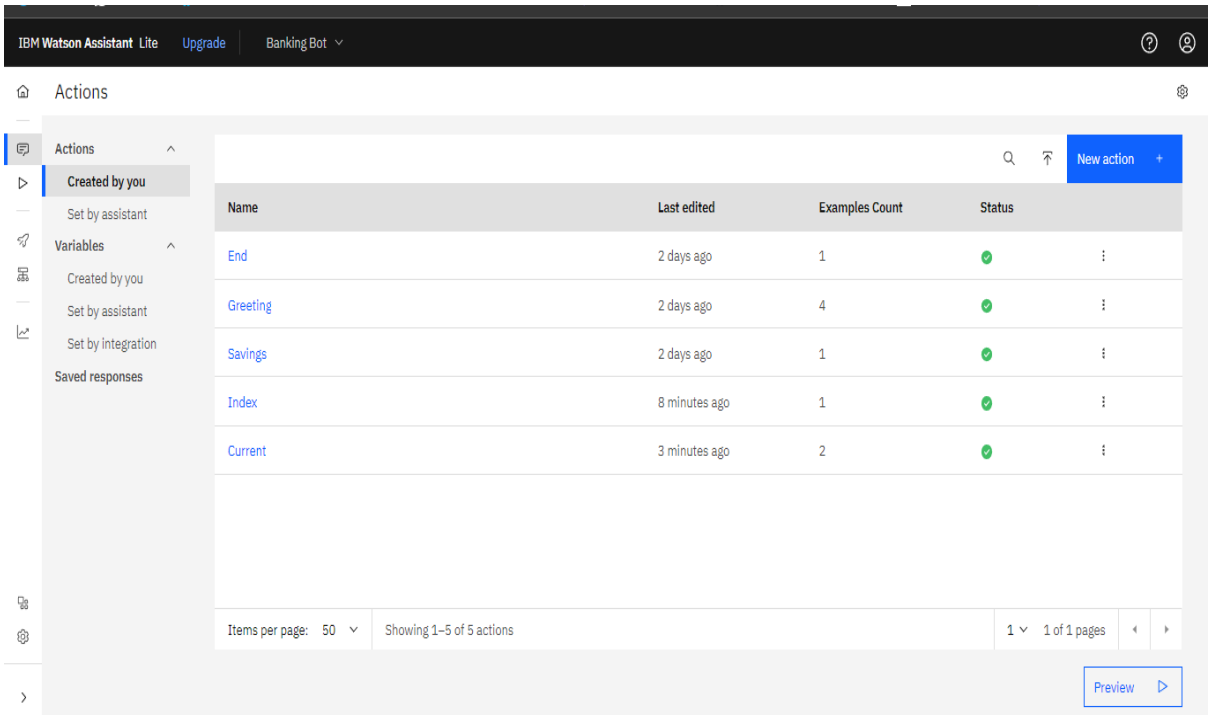
In go to Current account choose conversation steps 1 in create the Defining Customer Responses & click the option to create the options (Proprietorship & Partnership).



Create the current account options.

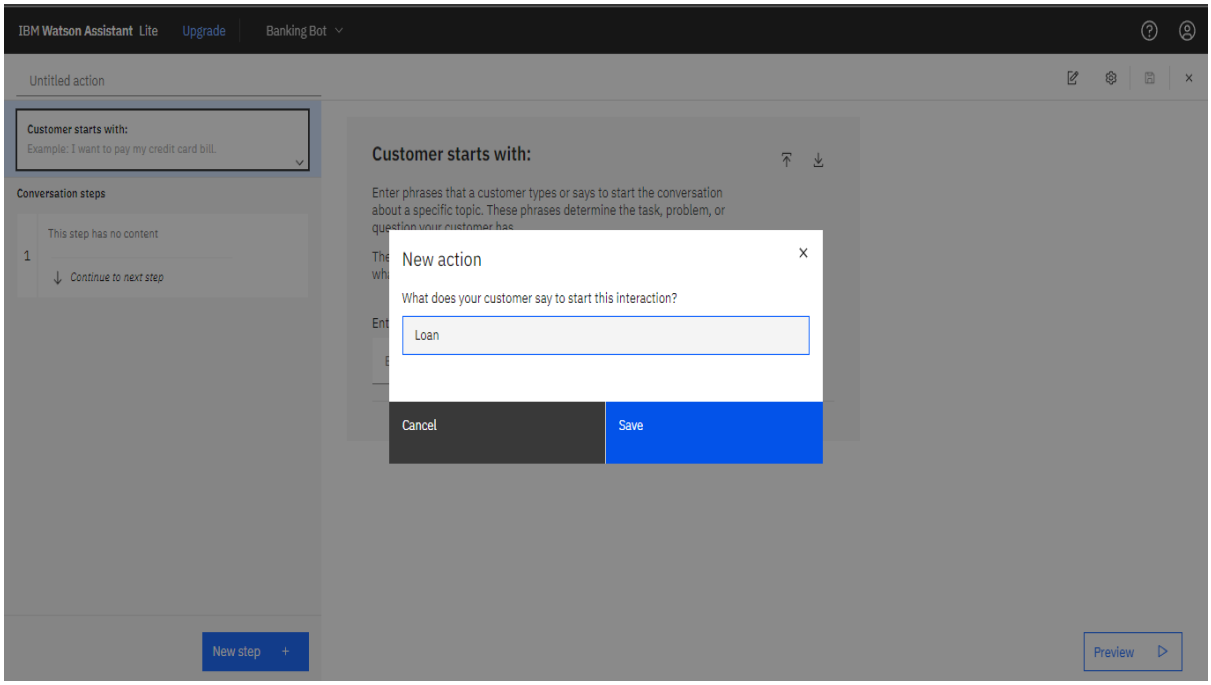


Current Account Action is successfully created.

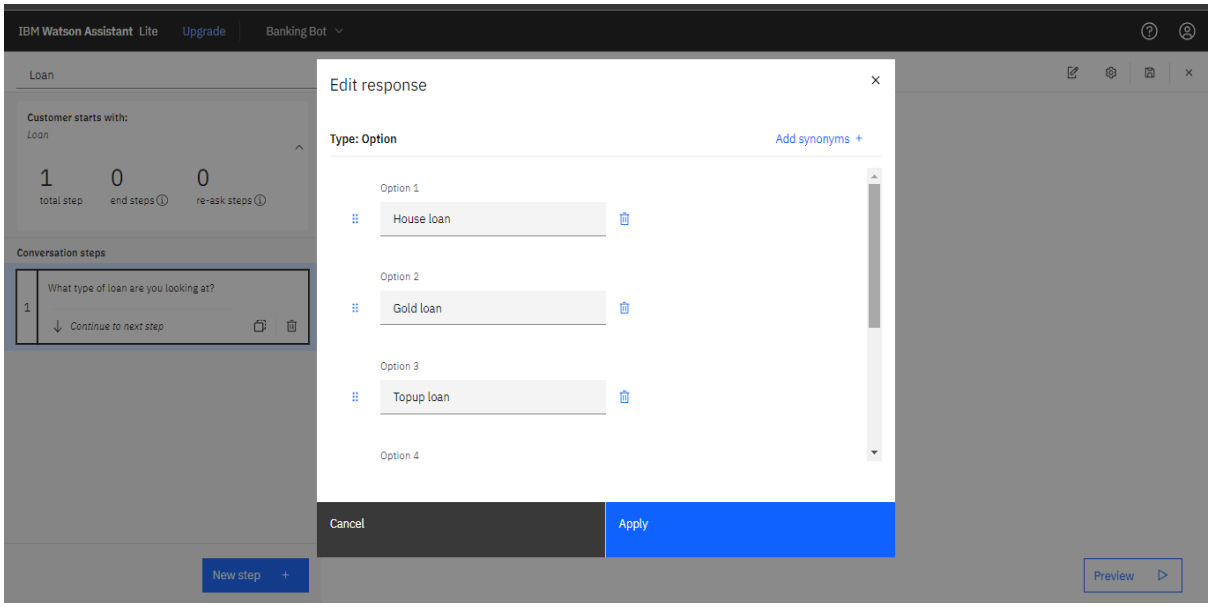


iv. Creating Loan Account Action

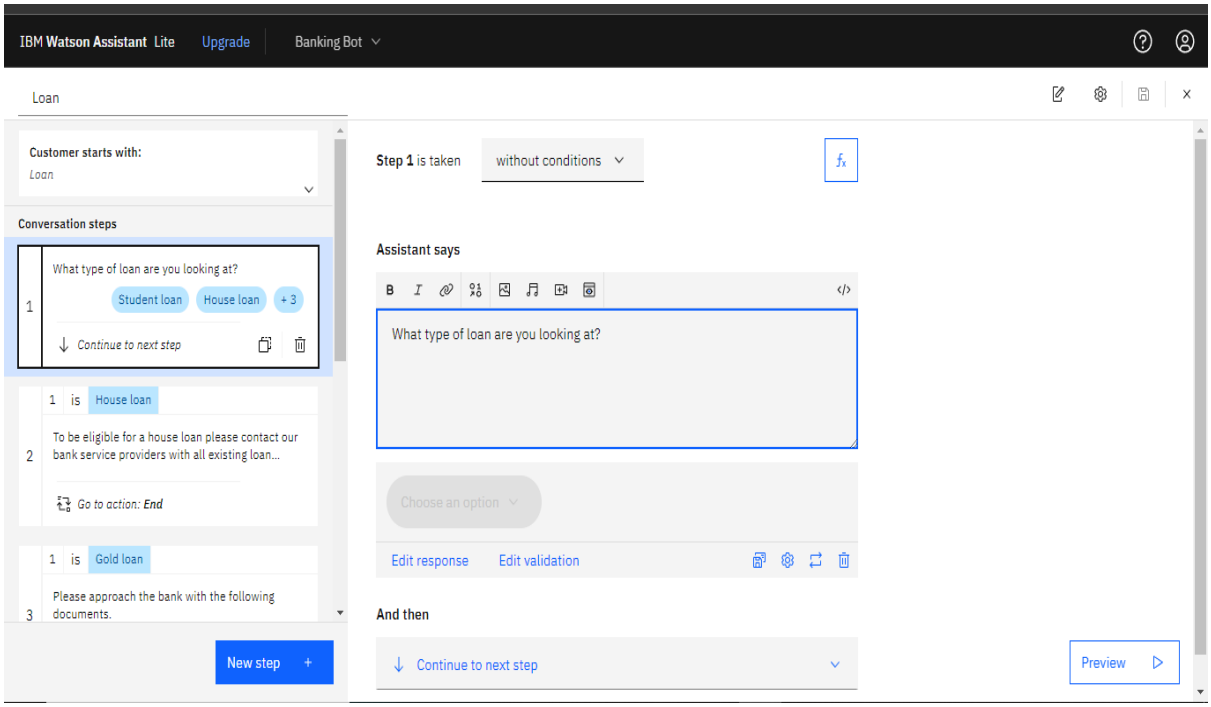
Creating the new action for Loan Account Action.



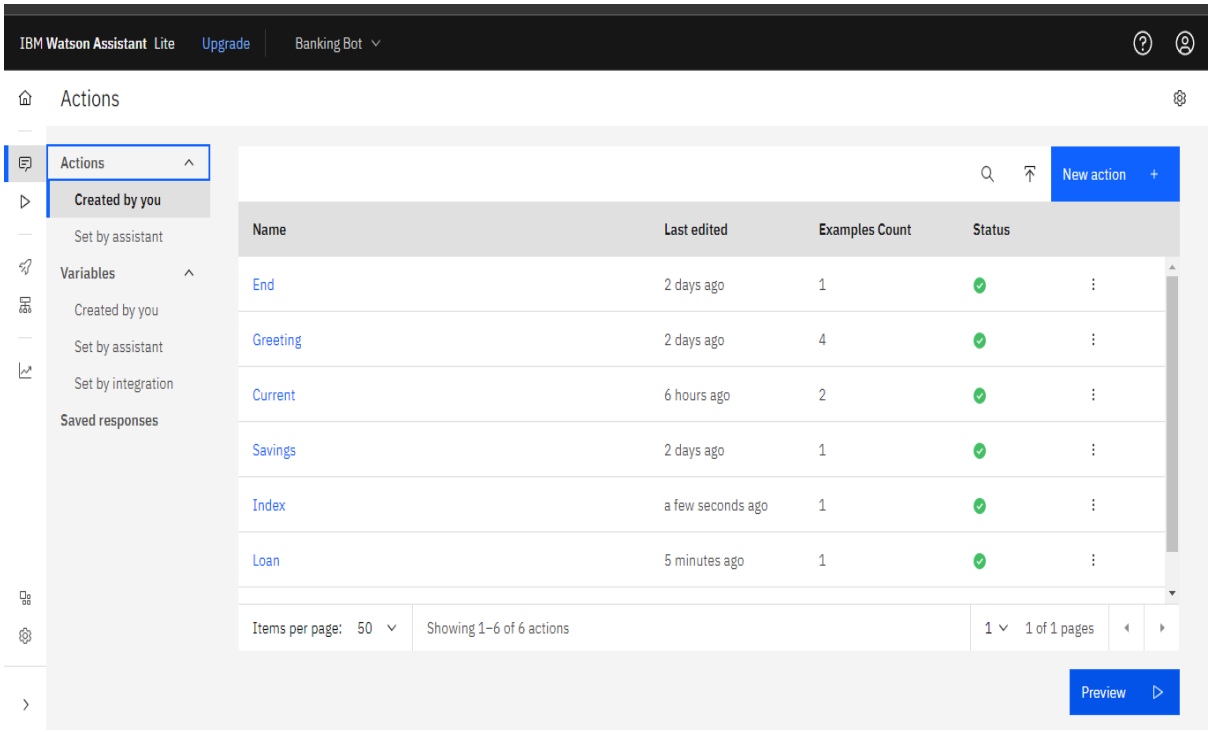
In go to Loan account choose conversation steps 1 in create the Defining Customer Responses & click the option to create the options (House loan, Gold loan, Top-up loan, Vehicle loan, Student loan)



Successfully create the options for loan account.

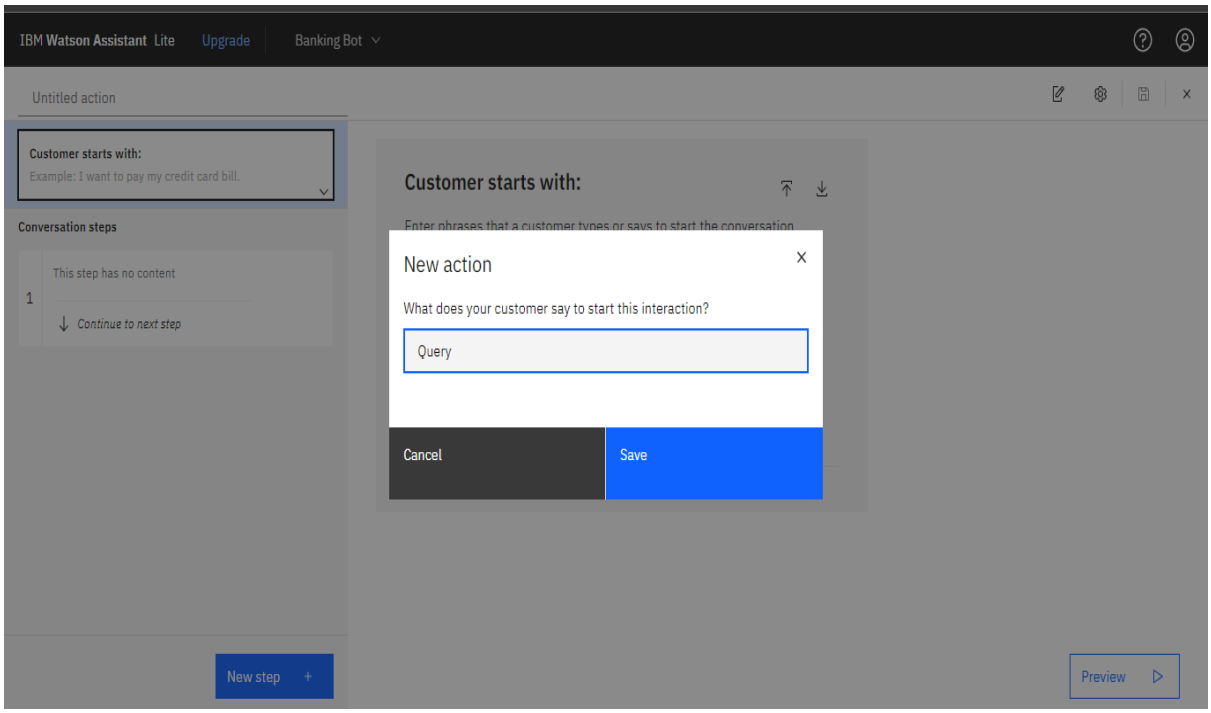


Loan Enquiry Action is successfully created and then choose the preview page.



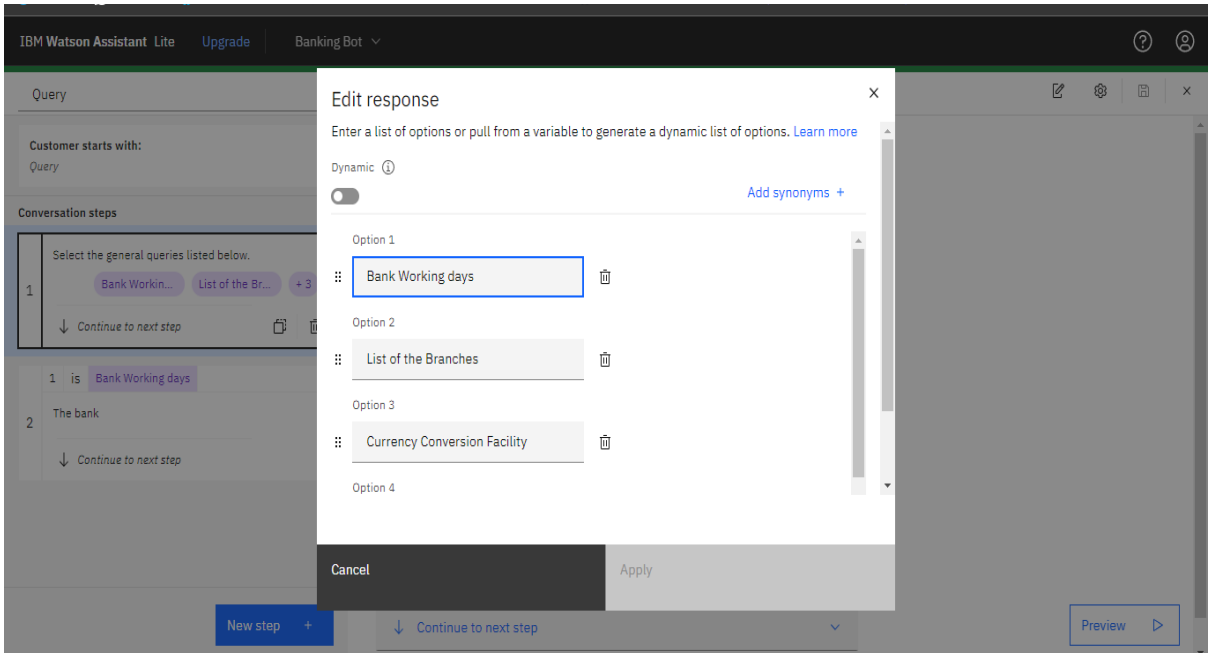
v. Creating General Queries Action.

Create the new action for General queries

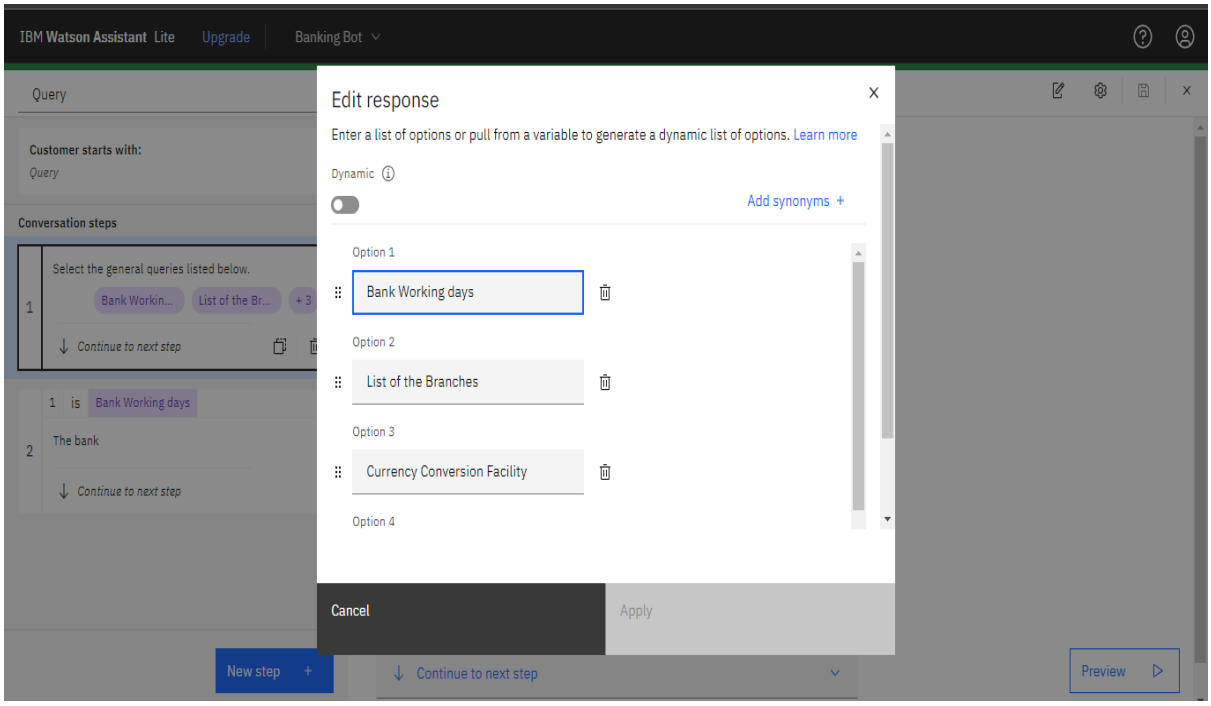


Create the general queries listed below → defining the customer responses (options are created)

Bank working days, list the branches and Storage locker Facility, etc.,

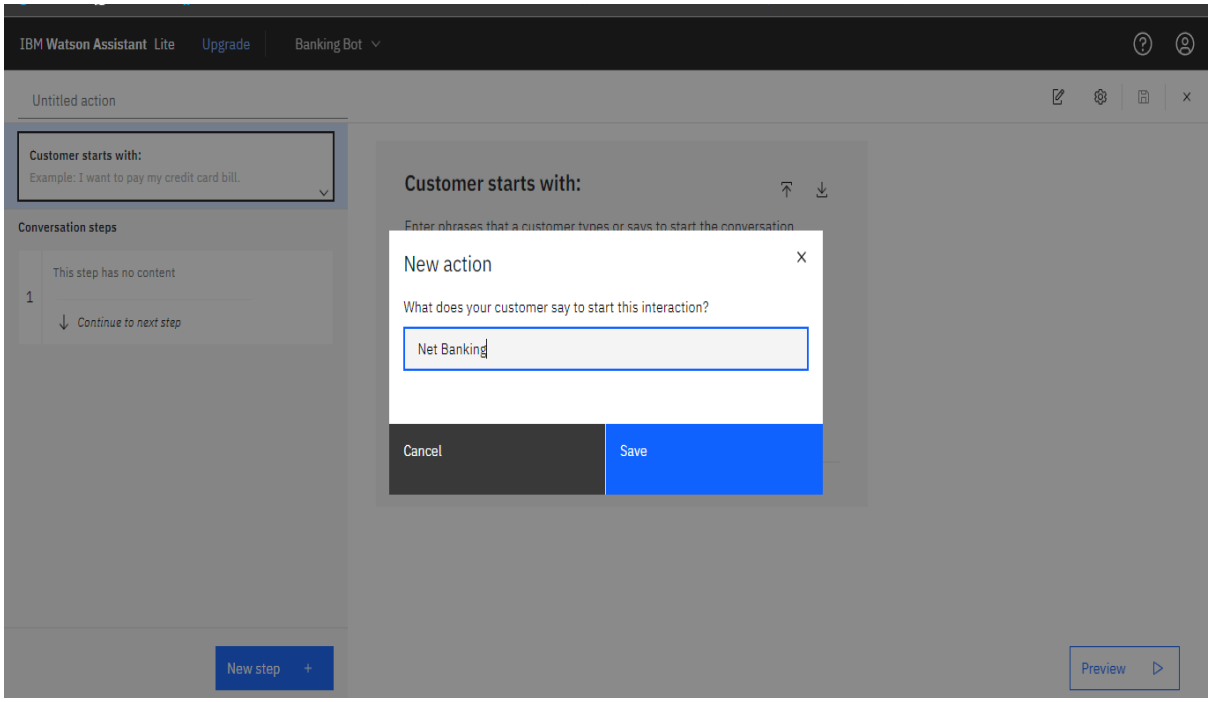


Successfully create the Loan query action.

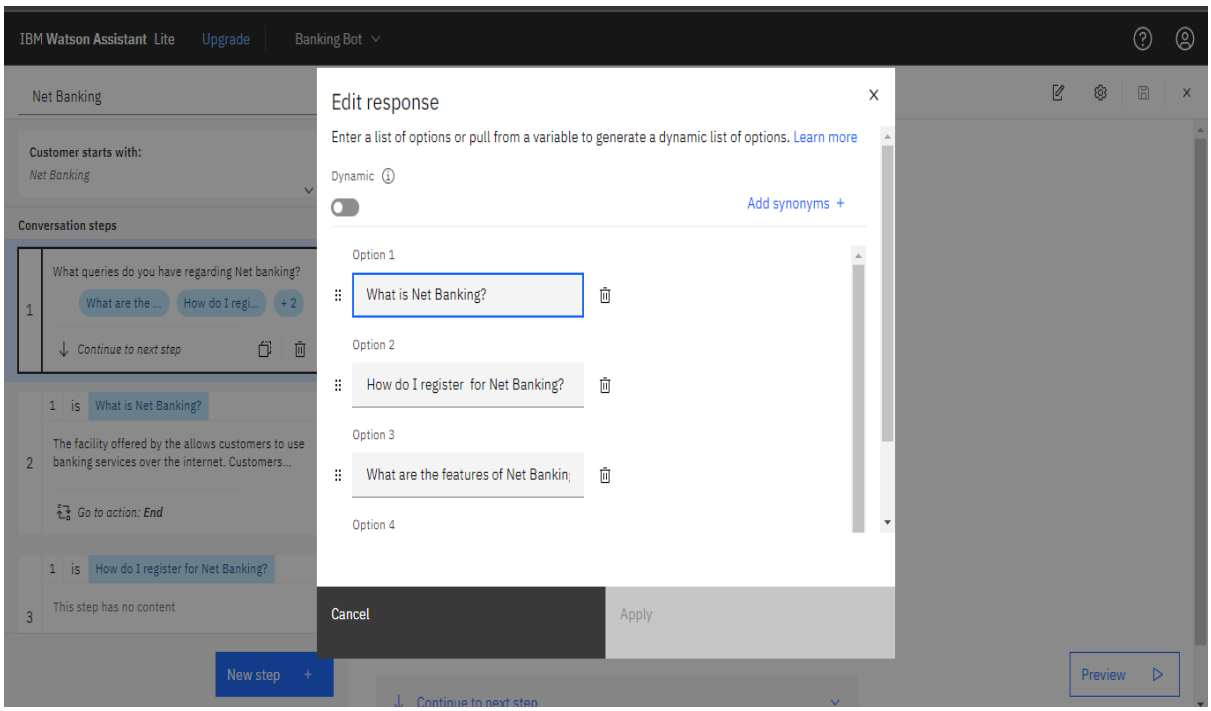


vi. Creating Net Banking Action.

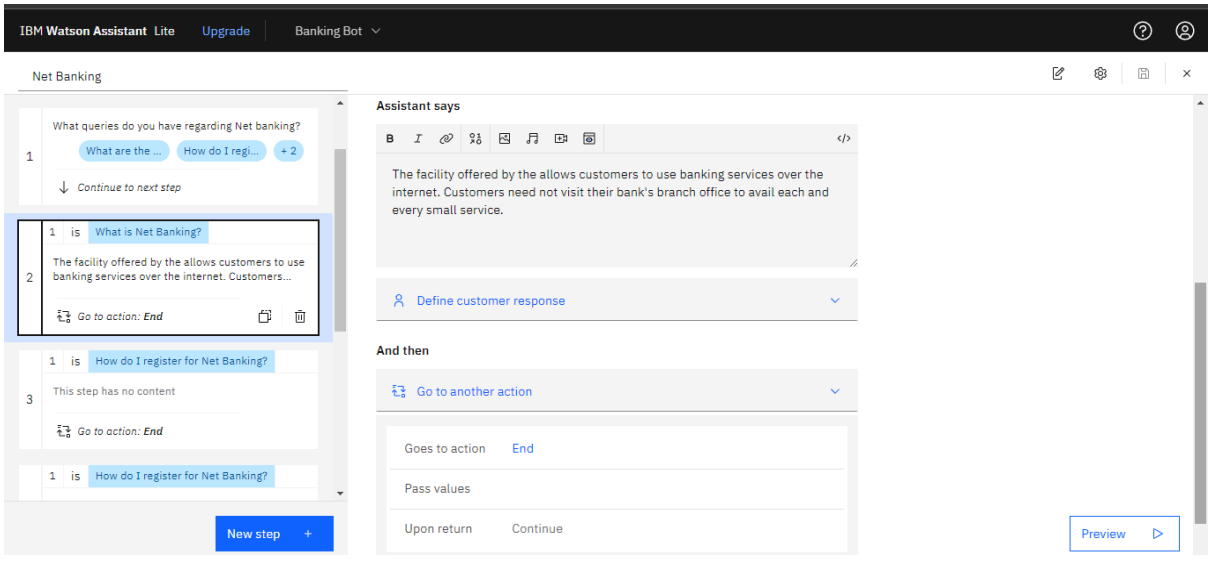
Create the new action for Net Banking actions.



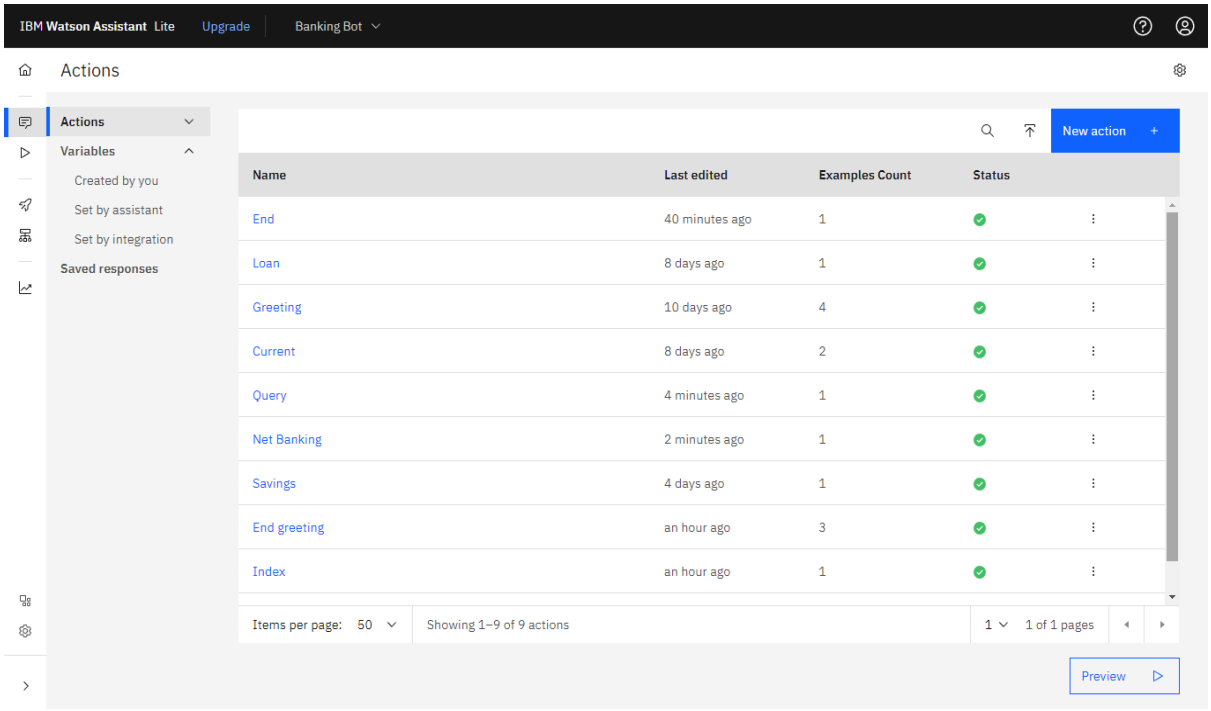
Create the queries regarding the Net banking Add option → Create the options (What is Net Banking, how do I register for Net Banking, Features of net banking)



Successfully create the Net Banking Account Action.

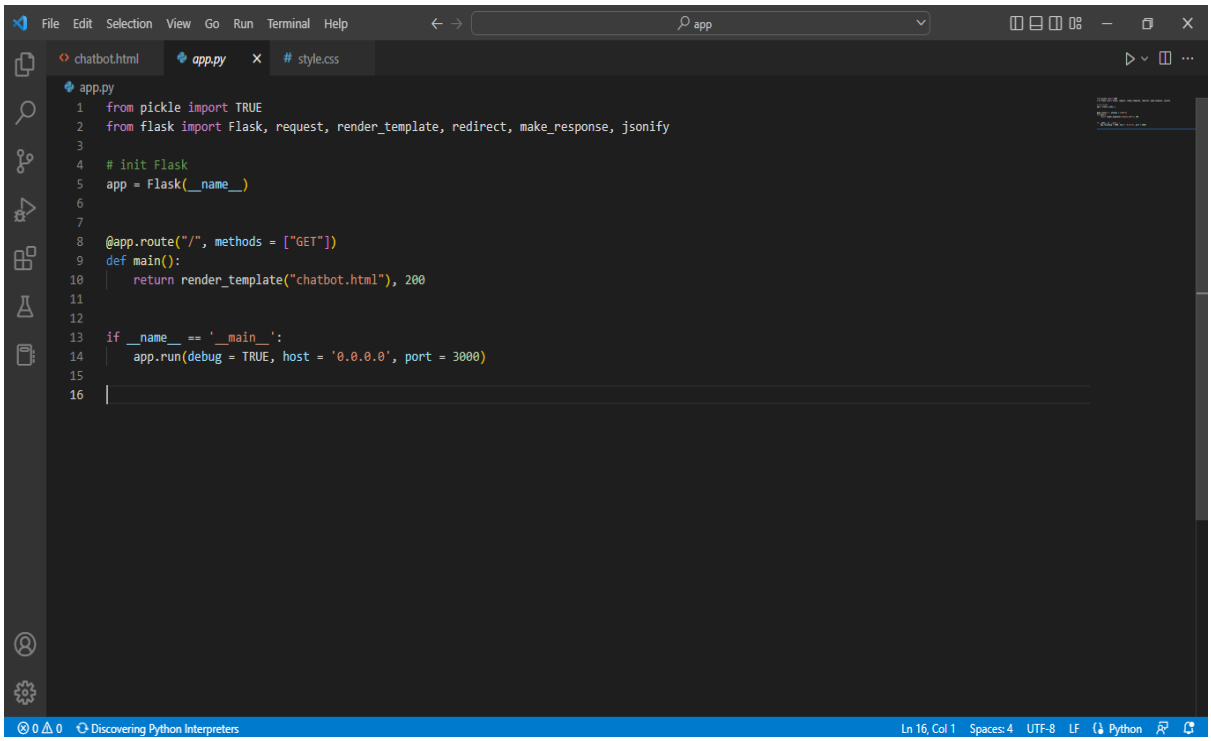


Successfully create the all the skills for chatbot.

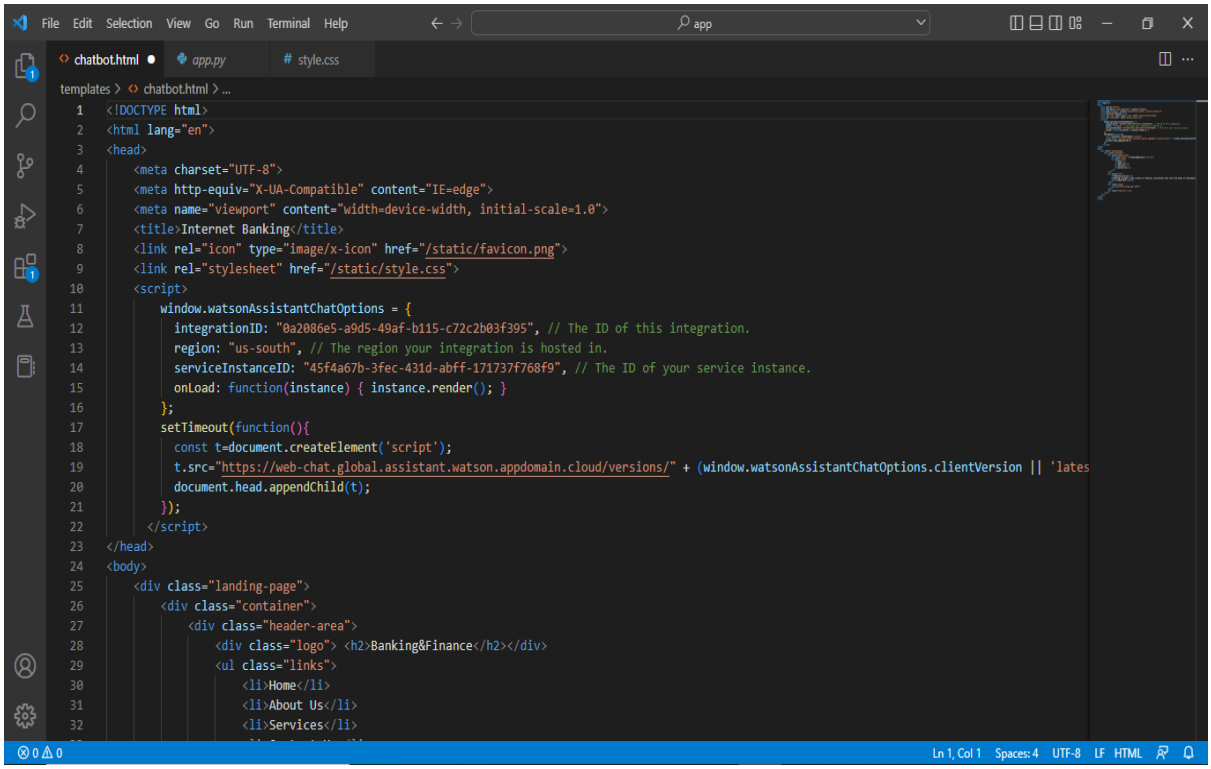


3.Creating Assistant & Integrate with Flask Web Page

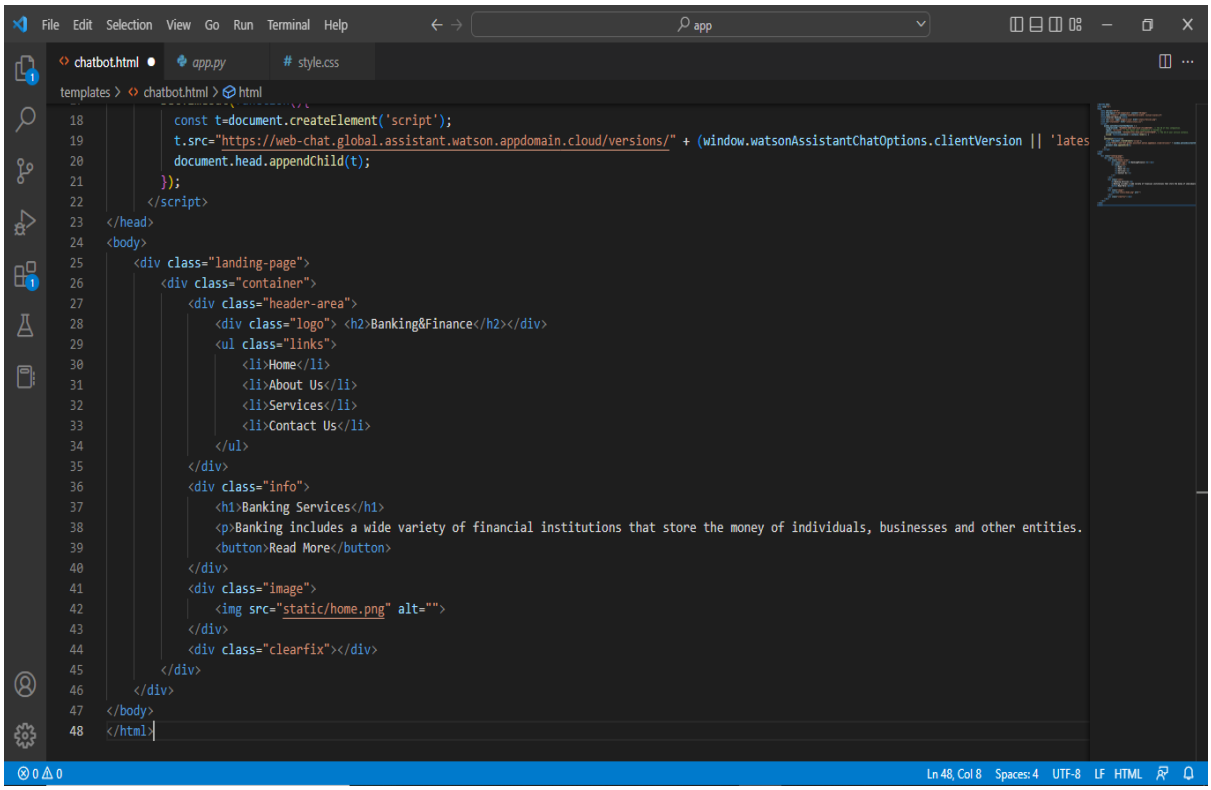
i. Build Python Code



ii. Build the HTML code

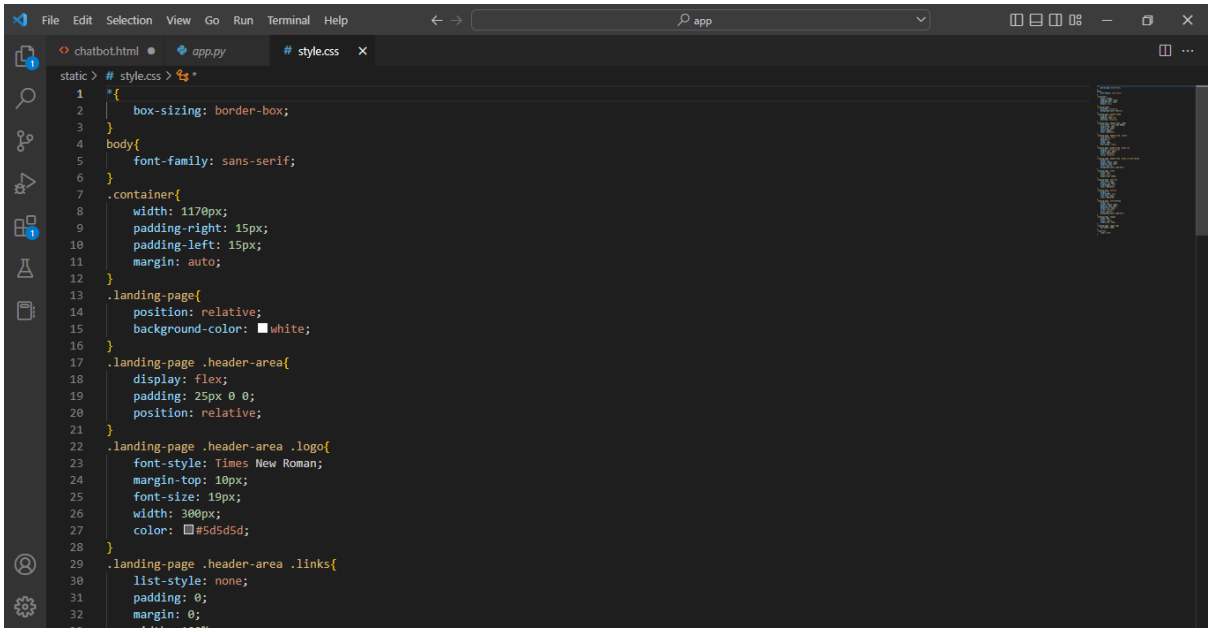


```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Internet Banking</title>
    <link rel="icon" type="image/x-icon" href="/static/favicon.png">
    <link rel="stylesheet" href="/static/style.css">
    <script>
        window.watsonAssistantChatOptions = {
          integrationID: "0a2086e5-a9d5-49af-b115-c72c2b03f395", // The ID of this integration.
          region: "us-south", // The region your integration is hosted in.
          serviceInstanceID: "45f4a67b-3fec-431d-abff-171737f768f9", // The ID of your service instance.
          onLoad: function(instance) { instance.render(); }
        };
        setTimeout(function(){
          const t=document.createElement('script');
          t.src="https://web-chat.global.assistant.watson.appdomain.cloud/versions/" + (window.watsonAssistantChatOptions.clientVersion || 'lates
          document.head.appendChild(t);
        });
      </script>
</head>
<body>
    <div class="landing-page">
        <div class="container">
            <div class="header-area">
                <div class="logo"> <h2>Banking&Finance</h2></div>
                <ul class="links">
                    <li>Home</li>
                    <li>About Us</li>
                    <li>Services</li>
```

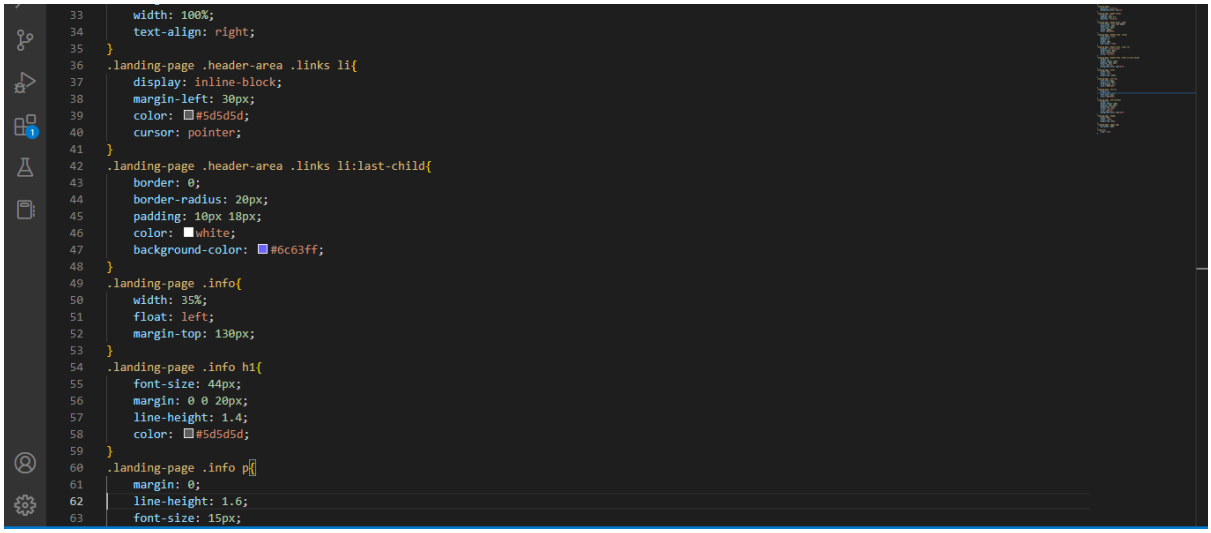


```
          const t=document.createElement('script');
          t.src="https://web-chat.global.assistant.watson.appdomain.cloud/versions/" + (window.watsonAssistantChatOptions.clientVersion || 'lates
          document.head.appendChild(t);
        });
      </script>
</head>
<body>
    <div class="landing-page">
        <div class="container">
            <div class="header-area">
                <div class="logo"> <h2>Banking&Finance</h2></div>
                <ul class="links">
                    <li>Home</li>
                    <li>About Us</li>
                    <li>Services</li>
                    <li>Contact Us</li>
                </ul>
            </div>
            <div class="info">
                <h1>Banking Services</h1>
                <p>Banking includes a wide variety of financial institutions that store the money of individuals, businesses and other entities.
                <button>Read More</button>
            </div>
            <div class="image">
                <img src="static/home.png" alt="">
            </div>
            <div class="clearfix"></div>
        </div>
    </div>
</body>
</html>
```

CSS Code:



```css
*{
    box-sizing: border-box;
}
body{
    font-family: sans-serif;
}
.container{
    width: 1170px;
    padding-right: 15px;
    padding-left: 15px;
    margin: auto;
}
.landing-page{
    position: relative;
    background-color: white;
}
.landing-page .header-area{
    display: flex;
    padding: 25px 0 0;
    position: relative;
}
.landing-page .header-area .logo{
    font-style: Times New Roman;
    margin-top: 10px;
    font-size: 19px;
    width: 300px;
    color: #5d5d5d;
}
.landing-page .header-area .links{
    list-style: none;
    padding: 0;
    margin: 0;
```

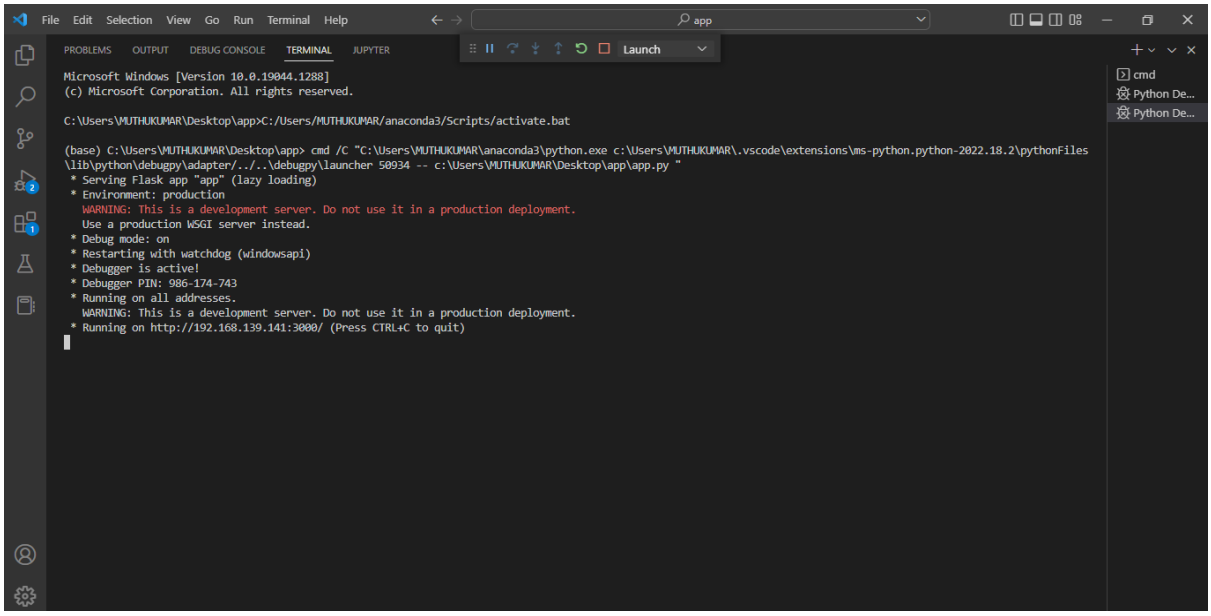


```css
    width: 100%;
    text-align: right;
}
.landing-page .header-area .links li{
    display: inline-block;
    margin-left: 30px;
    color: #5d5d5d;
    cursor: pointer;
}
.landing-page .header-area .links li:last-child{
    border: 0;
    border-radius: 20px;
    padding: 10px 18px;
    color: white;
    background-color: #6c63ff;
}
.landing-page .info{
    width: 35%;
    float: left;
    margin-top: 130px;
}
.landing-page .info h1{
    font-size: 44px;
    margin: 0 0 20px;
    line-height: 1.4;
    color: #5d5d5d;
}
.landing-page .info p{
    margin: 0;
    line-height: 1.6;
    font-size: 15px;
```

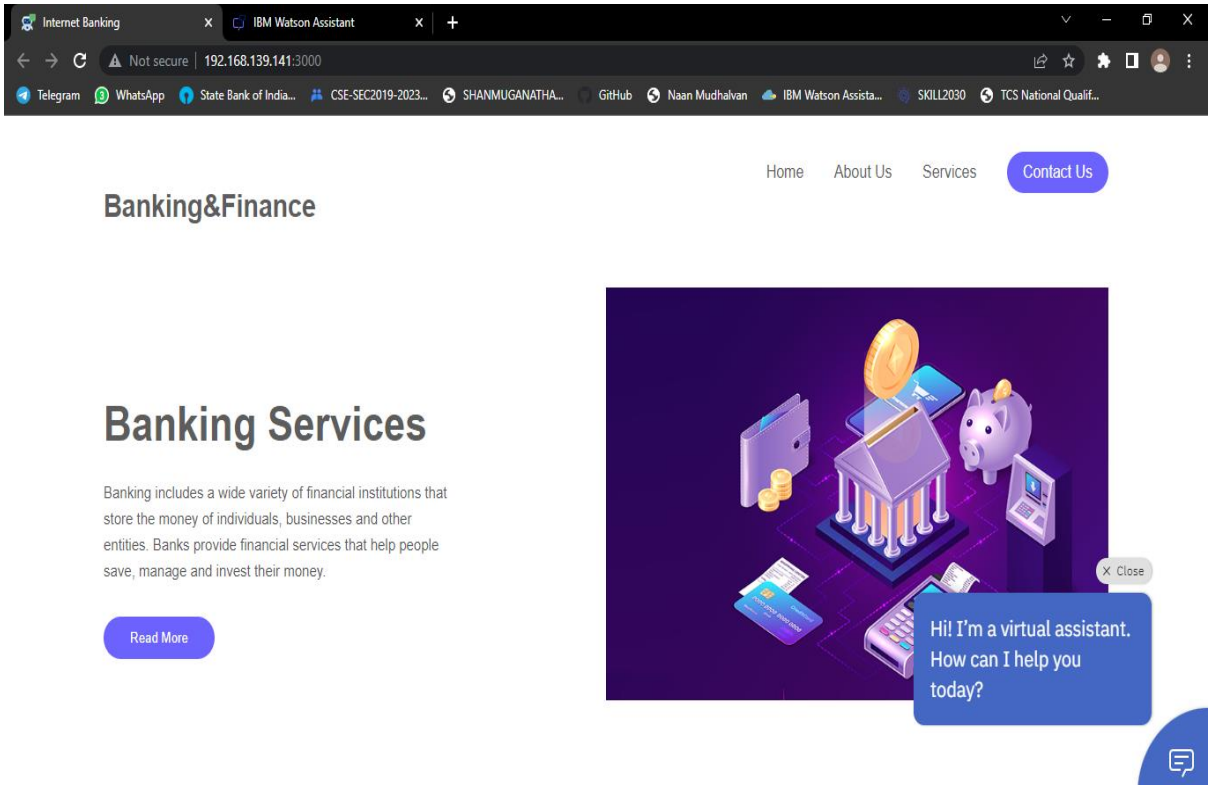
```css
    color: #5d5d5d;
}
.landing-page .info button{
    border: 0;
    border-radius: 20px;
    padding: 12px 30px;
    margin-top: 30px;
    cursor: pointer;
    color: white;
    background-color: #6c63ff;
}
.landing-page .image{
    width: 50%;
    float: right;
    margin-top: 35px;
}
.landing-page .image img{
    max-width: 100%;
}
.clearfix{
    clear: both;
}
```

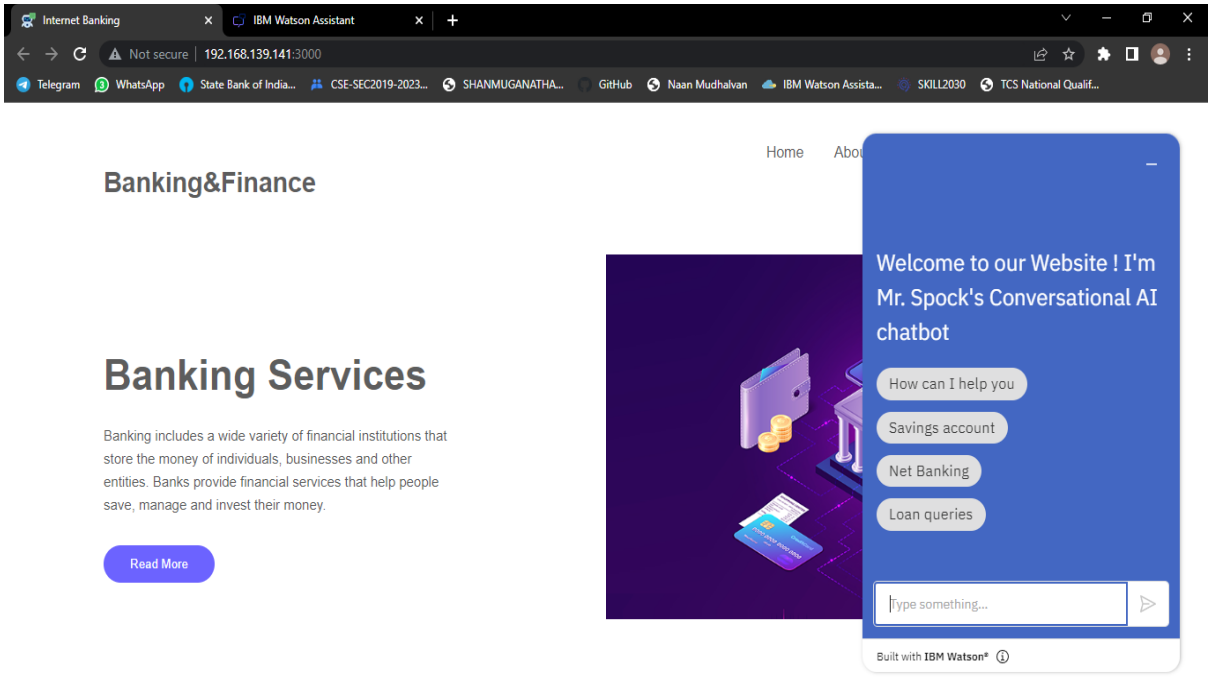
iii. Run the Application

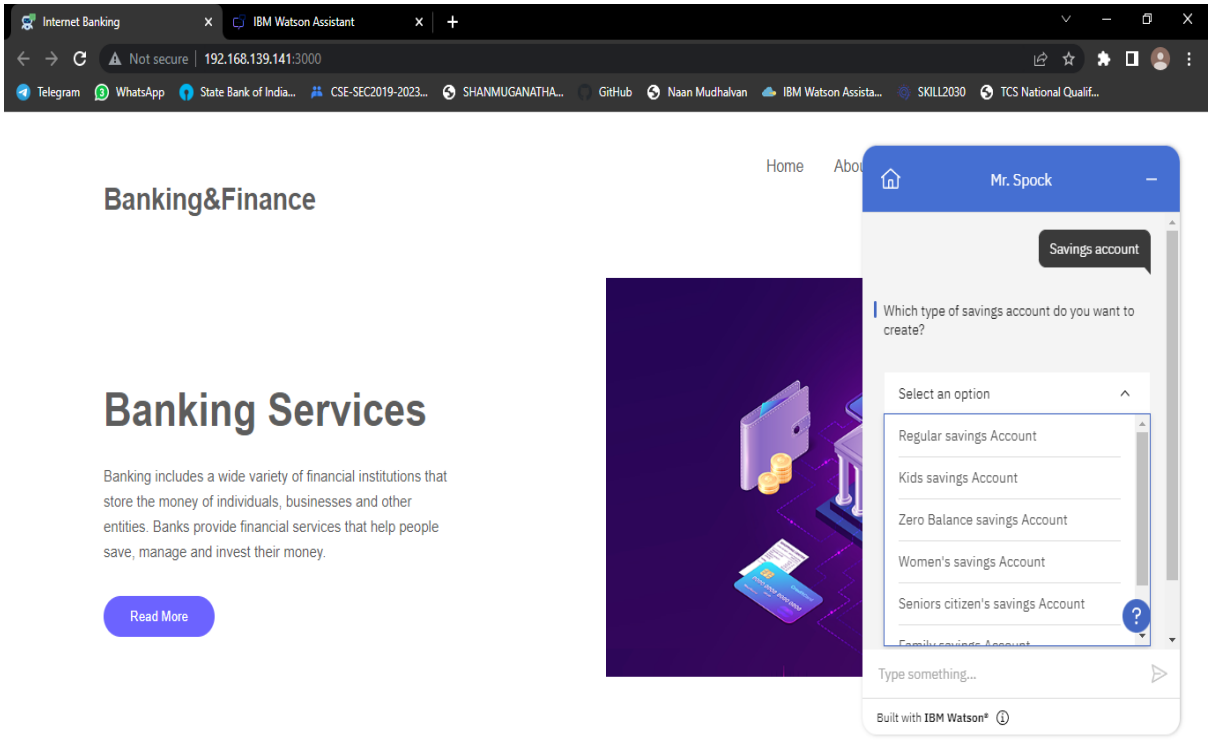
Run the code successfully.



Copy the http://192.108.139.141:3000/ and go to browser paste the link.




Internet Banking
IBM Watson Assistant
Not secure | 192.168.139.141:3000
Telegram
WhatsApp
State Bank of India...
CSE-SEC2019-2023...
SHANMUGANATHA...
GitHub
Naan Mudhalvan
IBM Watson Assista...
SKILL2030
TCS National Qualif...
Banking&Finance
Home
Banking Services
Banking includes a wide variety of financial institutions that store the money of individuals, businesses and other entities. Banks provide financial services that help people save, manage and invest their money.
Read More
Welcome to our Website ! I'm Mr. Spock's Conversational AI chatbot
How can I help you
Savings account
Net Banking
Loan queries
Type something...
Built with IBM Watson®


Internet Banking
IBM Watson Assistant
Not secure | 192.168.139.141:3000
Telegram
WhatsApp
State Bank of India...
CSE-SEC2019-2023...
SHANMUGANATHA...
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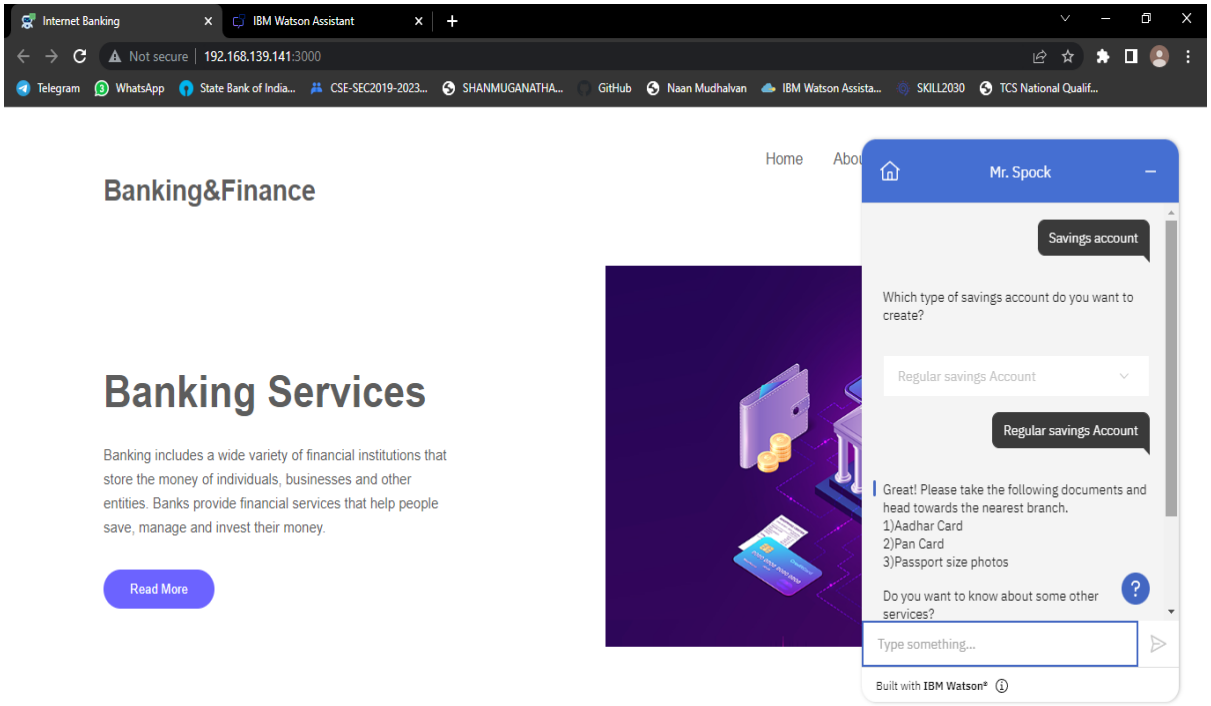
Banking&Finance
Home
Banking Services
Banking includes a wide variety of financial institutions that store the money of individuals, businesses and other entities. Banks provide financial services that help people save, manage and invest their money.
Read More
Mr. Spock
Savings account
Which type of savings account do you want to create?
Select an option
Regular savings Account
Kids savings Account
Zero Balance savings Account
Women's savings Account
Seniors citizen's savings Account
Type something...
Built with IBM Watson®


Internet Banking
IBM Watson Assistant
Not secure
192.168.139.141:3000
Telegram
WhatsApp
State Bank of India...
CSE-SEC2019-2023...
SHANMUGANATHA...
GitHub
Naan Mudhalvan
IBM Watson Assista...
SKILL2030
TCS National Qualif...
Banking&Finance
Home
Abou
Mr. Spock
Savings account
Which type of savings account do you want to create?
Regular savings Account
Regular savings Account
Great! Please take the following documents and head towards the nearest branch.
1)Aadhar Card
2)Pan Card
3)Passport size photos
Do you want to know about some other services?
Type something...
Built with IBM Watson®
Banking Services
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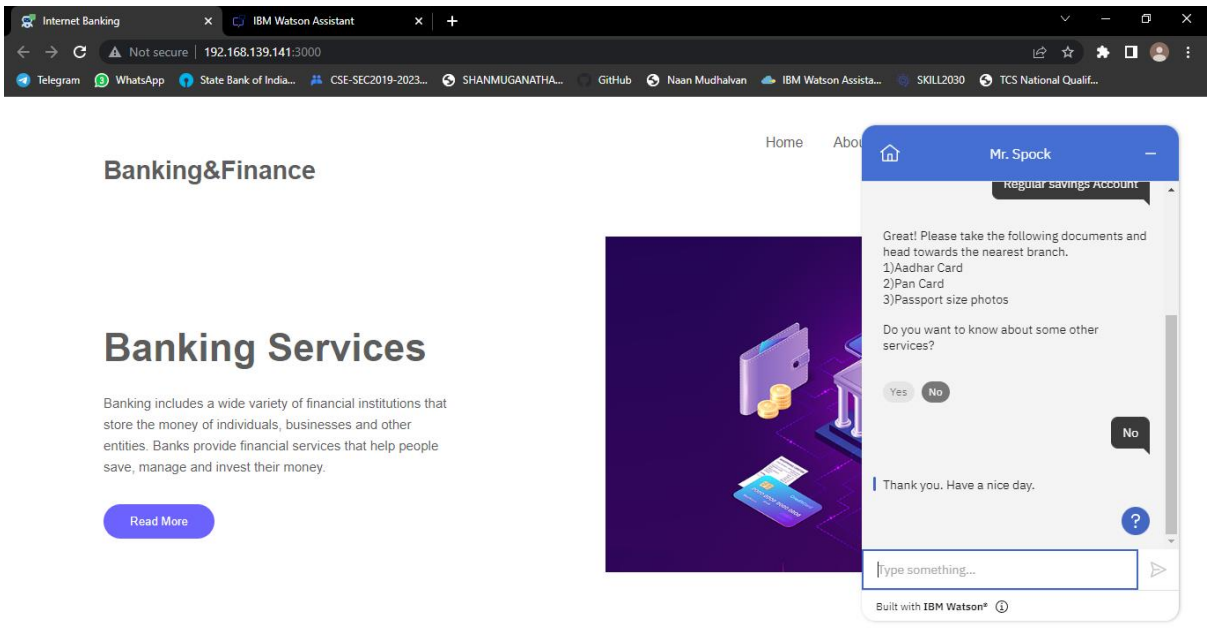
Read More


Internet Banking
IBM Watson Assistant
Not secure
192.168.139.141:3000
Telegram
WhatsApp
State Bank of India...
CSE-SEC2019-2023...
SHANMUGANATHA...
GitHub
Naan Mudhalvan
IBM Watson Assista...
SKILL2030
TCS National Qualif...
Banking&Finance
Home
Abou
Mr. Spock
Regular savings Account
Great! Please take the following documents and head towards the nearest branch.
1)Aadhar Card
2)Pan Card
3)Passport size photos
Do you want to know about some other services?
Yes
No
No
Thank you. Have a nice day.
Type something...
Built with IBM Watson®
Banking Services
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Read More