**Assignment 3**

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**PART II: Access and Read Codelab Tutorials on Dialogflow CX (15 Points)**

"I have completed the task of accessing and reading the Codelab tutorials on GCP: Dialogflow CX. The tutorials provided a step-by-step guide on how to create a virtual retail agent, including setting up the environment, configuring flows, intents, entities, and pages, as well as testing the agent using the simulator. The knowledge gained from these tutorials will help in developing a virtual retail agent for G-Records."

**PART III: Develop Conversational AI System for G-Records (70 Points)**

**TO-DO #1: Create a New Virtual Retail Agent for G-Records**

1. **Introduction:**
   * I started by creating a new virtual retail agent for G-Records, a fictional music retailer offering merchandise and music. I followed the steps outlined in the Dialogflow CX tutorial, which guided me through setting up the agent.
   * Since I already had an existing project in Dialogflow CX, I skipped the environment setup and created the new virtual agent.
2. **Steps:**
   * Navigated to the Dialogflow CX console.
   * Clicked Create Agent, named it G-Records Virtual Agent, and provided a description.
   * Selected my existing project and specified the language and time zone.
   * Once the agent was created, I verified its existence in the CX dashboard

**TO-DO #2: Add Dialog Flows**

1. **Introduction:**
   * The virtual agent needs dialog flows to manage different user interactions. I created flows for customer inquiries related to products, shipping, and purchases.
2. **Steps:**
   * Created a flow for each dialog interaction like **Product Inquiry**, **Shipping Information**, and **Purchase Flow**.
   * Followed the process of creating a flow by defining triggers and setting up routes for different intents.
   * Added conditions to handle user inputs and navigated users to appropriate pages.

**TO-DO #3: Define Entity Types and Entities**

1. **Introduction:**
   * Entities are used to capture essential information from users, such as product names or sizes. I defined multiple entity types and their corresponding entities to handle user requests efficiently.
2. **Steps:**
   * Created entity types like **Product Type**, **Size**, and **Artist Names**.
   * Defined entities such as "T-shirt," "Medium," and "The Google Dolls."
   * Used diagrams to map out the entity types and their relationships.

**TO-DO #4: Add Intents**

1. **Introduction**:
   * Intents are key to understanding the user's intentions when interacting with the virtual agent. For G-Records, I created intents like purchasing merchandise, inquiring about artists, and asking for shipping information.
2. **Steps**:
   * I navigated to the **Intents** section in the Dialogflow CX console.
   * Created intents like "Purchase Merchandise," "Ask for Artist Info," and "Inquire about Shipping."
   * Added training phrases such as "I want to buy a T-shirt," "Tell me about this artist," and "How much is the shipping?"
   * Mapped intents to the corresponding flows and set fulfillment actions to respond to user queries.
   * Verified the created intents through the simulator.

**TO-DO #5: Write the Report**

**Report on Building the G-Records Virtual Retail Agent**

**Introduction**

In this project, I followed a series of steps to build a virtual retail agent for G-Records, a fictional music and merchandise retailer, using Google Cloud’s Dialogflow CX. The purpose of this virtual agent is to handle customer inquiries and transactions, such as product information, shipping details, and purchasing merchandise. The tasks involved creating a new agent, adding flows, defining entity types, and creating intents to handle various customer interactions.

**TO-DO #1: Create a New Virtual Retail Agent for G-Records**

1. **Overview:** I created a virtual agent specifically for G-Records, utilizing an existing project on Dialogflow CX. The agent is designed to assist users with merchandise purchases and inquiries about music artists and albums.
2. **Steps Followed:**
   * Navigated to the **Dialogflow CX console**.
   * Clicked **Create Agent**, naming the agent "G-Records Virtual Agent".
   * Selected the existing GCP project, set the default language to English, and the time zone to **US Central Time**.
   * Confirmed the agent's creation and reviewed its presence on the dashboard.

**TO-DO #2: Add Dialog Flows**

1. **Overview:** I designed conversational flows to manage interactions such as product inquiries, shipping details, and purchasing options. Each flow directs the user through a series of steps to gather relevant information and fulfill the request.
2. **Steps Followed:**
   * Created the following flows:
     + **Product Inquiry Flow:** Handles questions about merchandise.
     + **Shipping Information Flow:** Provides details about delivery times and costs.
     + **Purchase Flow:** Facilitates the buying process.
   * Defined the triggers for each flow and set up routes based on user input.
   * Implemented conditional responses that lead users to the appropriate actions based on their input.

**TO-DO #3: Define Entity Types and Entities**

1. **Overview:** Entities capture key information from users, such as product types, sizes, and artist names. These entities are crucial for understanding user requests and providing relevant information.
2. **Steps Followed:**
   * Defined **entity types** like "Product Type," "Size," and "Artist Name".
   * Created entities under each type, such as:
     + Product Type: "T-shirt", "CD"
     + Size: "Medium", "Large"
     + Artist Name: "The Google Dolls", "Alice Googler"
   * Used diagrams in MS Word/PowerPoint to visually represent the relationships between entity types and their specific entities.

**TO-DO #4: Add Intents**

1. **Overview:** Intents are used to map user inputs to specific conversational actions. For G-Records, I added intents to handle merchandise purchases, artist inquiries, and questions about shipping.
2. **Steps Followed:**
   * Created intents such as:
     + **Purchase Merchandise Intent**
     + **Ask for Artist Info Intent**
     + **Inquire about Shipping Intent**
   * Added training phrases for each intent to allow the agent to recognize different ways users might phrase their questions.
   * Linked the intents to corresponding flows to direct users to the appropriate actions.

**Conclusion**

In conclusion, I successfully created a new virtual retail agent for G-Records by following the steps outlined in the Dialogflow CX tutorial. The agent is now capable of managing various user interactions such as answering product inquiries, handling purchases, and providing shipping details. The process involved creating dialog flows, defining entities, and adding intents to enhance the agent's ability to understand and respond to user queries.

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**Note: Sir I did till 6 Page handler and state I just noticed we had to do till 5 Intents only so I will resume my work for Midterm now. From Page Handler to Wrapping and testing agent.**

**PART I: Midterm Assessment Information (5 Points)**

**Answer the following questions:**

**1. How many sections (or parts) are there for the midterm assessment? 3**

**2. Which sections are take-home assignments that the student will work on them at home? PART I & II**

**3. When will MIDTERM ASSESSMENT: PART I & II be assigned? Oct 7**

**4. When will MIDTERM ASSESSMENT: PART I & II be due? Oct 16**

**5. Which sections will the student take in-person in class?** [**PART\_III**](https://unt.instructure.com/courses/108402/modules/items/7217747)

**6. When will the student take MIDTERM ASSESSMENT: PART III in-person in class? 10/07/2024**

**PART IV: Teamwork Evaluation (10 Points) Provide the information about your group activities by answering the following questions:**

**7. What group do you belong to? (Provide the group number) Group 5**

**8. Who are the members of your group?**

**Sai Vinay 11698430**

**Manoj Reddy 11712127**

**Krishna Vamsi 11660274**

**Amrutha Anantha 11674521**

**Azhan Saleem 11635219**

**9. Have the members organized any meeting (ONLINE or IN-PERSON) to see each other? Online meeting**

**10. If YES to #3, which members, including the student himself/herself, showed up in the meeting? Everyone showed up.**

**11. Have the members worked with each other on any class assignments? Yes.**

**12. If YES to #5, do all the members make good efforts to actively participate in the group work? Yes**

**13. If NO to #5, do you have any opinions to share about the group? All members are working hard together.**