

# COSC 310 - Team 15

## Summarizing Test Cases

**Test Case 1:** User enquires about pain, giving only a general location (no specific location, no pain type)

**Summary of case:**

In this case the agent would detect that the user is experiencing pain, and it should detect the general location of the pain. With this information taken to the query handler which is our major intent that ensures the correct event is called from our index.js file. The agent would either respond with a default response or prompt the user to rephrase what they are saying. This response depends on the wording of the users prompt to the agent.

Example 1.

User Input: *"I have a headache"*

Agent Response: "Sorry, can you say that again?"

Example 2.

User Input: *"I am experiencing a headache"*

Agent Response: *"If you're feeling down, how about drawing or painting something?"*

**Test Case 2:** User enquires about something completely unrelated to the two topics the agent is trained to respond to.

**Summary of case:**

The agent in this case would not be able to recognize a pain type or specific location so instead of going to the query handler would trigger the default fallback intent. The default fallback intent is another major intent with training phrases to help the agent ask the user for more information to better understand how to respond. The agent would respond with a default response which is likely to be asking the user to rephrase or restate what they are trying to say.

Example 1.

User Input: *"What is the weather like today?"*

Agent Response: *"I didn't get that. Can you repeat?"*

Example 2.

User Input: *"How is traffic today?"*

Agent Response: *"Sorry, I didn't get that. Can you rephrase?"*

**Test Case 3:** User enquires about pain, misspelling the location of pain

**Summary of case:**

Since our agent is enabled with the feature to handle spelling mistakes (this is not hardcoded) the agent's response is with approximate entity matching rather than exact. In a general enquiry from the user with correct spelling there is exact entity matching. Again, in this case the agent would still detect that the user is experiencing pain, and it should detect the general location of the pain triggering the query handler which matches an event in the index.js file.

Example 1.

User Input: *"I have sharp pain in my **ankl**"*

Agent Response: *"Is this pain the result of a recent injury?"*

User Input: "yes"

Agent Response: *"Perform ankle ABC's. Is there anything else that I can help you with?"*

Note: Misspelling in specific location of pain "ankl" - agent recognizes that the user means to say "ankle".

Example 2.

User Input: *"I have pain in my rist"*

Agent Response: *"Is this pain the result of a recent injury?"*

User Input: "yes"

Agent Response: *"There are multiple factors that cause wrist pain. Here is a list of the symptoms and diagnoses*

*<https://www.mayoclinic.org/diseases-conditions/wrist-pain/symptoms-causes/syc-203662>*

*13 Is there anything else that I can assist you with today?"*

Note: Misspelling in specific location of pain "rist" - agent recognizes that the user means to say "wrist".

**Test Case 4:** User enquires about pain, giving only a specific location

**Summary of case:**

Through this test case, the agent detects the specific location and asks the user if the pain is the result of a recent injury. From there the agent matches an event as it typically would through triggering the query handler and matching an event in the index.js file.

Example 1.

User Input: *"My forearm hurts"*

Agent Response: *"Is this pain the result of a recent injury?"*

User Input: "yes"

Agent Response: *"There are many different causes of forearm pain. Here is a list of some of the causes of pain and their symptoms*

*<https://www.healthgrades.com/right-care/bones-joints-and-muscles/forearm-pain#:~:text=What%20causes%20forearm%20pain%3F,nerve%20problem%2C%20or%20even%20cancer.> IS there anything else that I can help you with today?"*

Example 2.

User Input: *"My shoulders are in pain"*

Agent Response: *"Is this pain the result of a recent injury?"*

User Input: "yes"

Agent Response: *"There are many different factors that cause shoulder pain. See the list provided for more info here*

*<https://orthoinfo.aaos.org/en/diseases--conditions/shoulder-pain-and-common-shoulder-problems/> Is there anything else that I can help you with today?"*

**Test Case 5:** User enquires about pain, giving only a specific pain type

**Summary of case:**

Through this test case, the agent detects the specific pain type and asks the user to be more specific about where they are experiencing the pain. The agent is trained to ask the user for information that is missing. With this missing information the agent is able to match an event as it typically would through triggering the query handler and matching an event in the index.js file.

Example 1.

User Input: *"My body is aching"*

Agent Response: *"Can you be more specific about where you're experiencing the pain?"*

Note: The agent recognizes the pain type - "aching".

Example 2.

User Input: *"I am experiencing sharp pain"*

Agent Response: *"Can you be more specific about where you're experiencing the pain?"*

**Test Case 6:** User enquires about pain, providing both a specific pain type and a specific location.

**Summary of case:**

Given this case, the agent is able to respond as it typically would. The agent would detect that the user is experiencing pain, and it should detect the general location of the pain. With this information taken to the query handler which is our major intent that ensures the correct event is called from our index.js file.

Example 1.

User Input: *"My shoulders are in aching pain"*

Agent Response: *"Is this pain the result of a recent injury?"*

User Input: *"yes"*

Agent Response: *"There are many different factors that cause shoulder pain. See the list provided for more info here*

*<https://orthoinfo.aaos.org/en/diseases--conditions/shoulder-pain-and-common-shoulder-problems/> Is there anything else that I can help you with today?"*

Note: The agent recognizes the specific location and pain type - "shoulders" and "aching".

Example 2.

User Input: *"I have stabbing pain in my wrist"*

Agent Response: *"Is this pain the result of a recent injury?"*

User Input: *"yes"*

Agent Response: *"There are multiple factors that cause wrist pain. Here is a list of the symptoms and diagnoses*

*<https://www.mayoclinic.org/diseases-conditions/wrist-pain/symptoms-causes/syc-203662> 13 Is there anything else that I can assist you with today?"*

Note: The agent recognizes the specific location and pain type - "wrist" and "stabbing pain".

**Test Case 7:** User asks follow up questions regarding treatment.

**Summary of case:**

Considering this case, the agent is not trained to respond beyond giving example exercises given a specific injury. Although the agent responds as it typically would up until this point. The follow up questions in this case would trigger a default response. The agent would ask the user to rephrase what they are saying. As the agent is trained to gather information about specific location of pain and pain type, the agent would ask the user to rephrase until it has the user input that it can recognize.

Example 1.

User Input: *"My shoulders are in aching pain"*

Agent Response: *"Is this pain the result of a recent injury?"*

User Input: "yes"

Agent Response: *"There are many different factors that cause shoulder pain. See the list provided for more info here*

*<https://orthoinfo.aaos.org/en/diseases--conditions/shoulder-pain-and-common-shoulder-problems/> Is there anything else that I can help you with today?"*

User Input: *"Is that a liable source?"*

Agent Response: *"Sorry, I didn't get that. Can you rephrase?"*

**Test Case 8:** User enquires about pain, misspelling the type of pain

**Summary of case:**

Since our agent is enabled with the feature to handle spelling mistakes (this is not hardcoded) the agent's response is with approximate entity matching rather than exact. In a general enquiry from the user with correct spelling there is exact entity matching. Again, in this case the agent detects the specific location and asks the user if the pain is the result of a recent injury. From there the agent matches an event as it typically would through triggering the query handler and matching an event in the index.js file.

Example 1.

User Input: *"My shoulders are in **aking** pain"*

Agent Response: *"Is this pain the result of a recent injury?"*

User Input: *"yes"*

Agent Response: *"There are many different factors that cause shoulder pain. See the list provided for more info here*

*<https://orthoinfo.aaos.org/en/diseases--conditions/shoulder-pain-and-common-shoulder-problems/> Is there anything else that I can help you with today?"*

Note: Misspelling of pain type "aking" - agent recognizes that the user means to say "aching".

**Test Case 9:** User enquires about pain, misspelling both the type of pain and specific location of pain.

**Summary of case:**

Since our agent is enabled with the feature to handle spelling mistakes (this is not hardcoded) the agent's response is with approximate entity matching rather than exact. In a general enquiry from the user with correct spelling there is exact entity matching. Again, in this case the agent detects the specific location and asks the user if the pain is the result of a recent injury. From there the agent matches an event as it typically would through triggering the query handler and matching an event in the index.js file. Since this is not hardcoded and the spelling mistake in this case is in both the specific location of the pain and the pain type, the matched entity is not always exact.

Example 1.

User Input: *"My **sholders** are in **aking** pain"*

Agent Response: *"Is this pain the result of a recent injury?"*

User Input: *"yes"*

Agent Response: *"There are many different factors that cause shoulder pain. See the list provided for more info here*

<https://orthoinfo.aaos.org/en/diseases--conditions/shoulder-pain-and-common-shoulder-problems/> *Is there anything else that I can help you with today?"*

Note: Misspelling of the specific location of pain “sholders” and pain type “aking” - agent recognizes that the user means to say “shoulders” as the specific location and “aching” as the pain type.

**Test Case 10:** User wants to book an appointment, however they do not correctly spell the word.

**Summary of case:**

In this case, the user misspelled the word “appointment”, however Appointment is not an entity, and therefore there is no fuzzy matching associated with that word. Therefore, the user does not understand the intention and the word “appointment” must be correctly spelled in order for the agent to match the intention of the user to booking an appointment. This is a limitation of our program. In order to change this, there would have to be a way to include appointment as an entity so that fuzzy matching can be enabled.

Example 1.

User Input: *“Can I book an apoyntment?”*

Agent Response: *“I missed what you said. What was that?”*

Example 2.

User Input: *“I want to book an appontment.”*

Agent Response: *“Can you say that again?”*

**Test Case 11:** User wants to make an appointment for someone else.

**Summary of case:**

The agent should recognize the intention to book an appointment, whether it is for the user themselves or on behalf of someone else. No matter what the circumstances are, the agent is programmed to respond the same way to the intention of booking an appointment. Once the intent has been matched, the agent will proceed to ask for a name, number and time to call the user back and finalize the day and time of the appointment, as well as the purpose for the appointment.

Example 1.

User input: *“Can I book an appointment for my son tomorrow?”*

Agent Response: *“Sure thing. I’ll schedule a call-back. When would you like to be reached?”*

**Test Case 12:** User inquires about booking an appointment, without giving a day or time.

**Summary of case:**

The agent should match the intention to book an appointment and respond with the appropriate response for booking an appointment. Afterwards, the agent will ask for a name, number and time to call the user back in order to proceed with booking the appointment.

Example 1.

User input: *“I’d like to book an appointment.”*

Agent Response: *“Sure thing. I’ll schedule a call-back. When would you like to be reached?”*

**Test Case 13:** User inquires about booking an appointment, giving a day and a time.

**Summary of case:**

In this case, the agent should match the intention to book an appointment and respond with the appropriate response for booking an appointment. Afterwards, the agent will ask for a name, number and time to call the user back in order to proceed with booking the appointment.

Example 1.

User Input: *"Can I book an appointment at 2pm on Tuesday?"*

Agent Response: *"Sure thing. I'll schedule a call-back. When would you like to be reached?"*

**Test Case 14:** User inquires about booking an appointment, giving only a day.

**Summary of case:**

In this case, the user does not give a specific time to book an appointment, however the chatbot responds with a generic response to the query for booking an appointment. The chatbot tells the user they will give them a call and then proceeds to ask for a name, number and time at which to call.

Example 1.

User Input: *"I would like to book an appointment on Friday."*

Agent Response: *"Sure thing. I'll schedule a call-back. When would you like to be reached?"*

**Test Case 15:** User inquires about booking an appointment, giving only a time.

**Summary of case:**

In this case, the user gives a time but not a day for booking an appointment. Depending on the way the query is phrased, the agent will either give a default response or it will give the appropriate response for wanting to book an appointment. Once the agent matches the user's intention to book an appointment, it should then ask for a name, number and time to call the user back to follow up with booking the appointment.

Example 1.

User Input: *"Book an appointment for 5pm."*

Agent Response: *"Sure thing. I'll schedule a call-back. When would you like to be reached?"*