Emily Pedersen
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CS 160

<div align="center">**Project 02 Quick Care**</div>

Overview

Quick Care (QC) is a simple voice controlled first aid assistant using Amazon Alexa and a Lambda server. This design uses "T" shaped design methodology. I used three task flows, which I named A, B, and C, to describe the various workflows of the design. To invoke the application, the user says, "start quick care". Then the user can have a dialog with the app. The main dialog of Quick Care is always , "Quick Care here, what can I help you with?".

Task flow A is the top of the "T" shaped design and takes care of the following requests: checking an injured adult, unconscious/conscious choking, AED, controlling bleeding, burns, poisoning, neck injuries, spinal injuries, and stroke and Quick Care replies, "Call 911. Do you need further assistance? Say 'Yes' if you need further assistance, and 'No' to quit Quick Care." If the user says, "Yes", she is brought back to the main dialog and is prompted by Quick Care to ask another question. If the user says, "No", her session ends with Quick Care.

Task flow B is also the top of the "T" shaped design, but has slight depth and takes care of first aid choking requests. In this dialog, the user must respond "conscious/unconscious choking". If the user replies with a different command, Quick Care will continually reprompt the user until she correctly replies with either "unconscious/conscious choking." After the user correctly replies, Quick Care says, "Call 911. Do you need further assistance? Say 'Yes' if you need further assistance, and 'No' to quit Quick Care." If the user says, "Yes", she is brought back to the main dialog and is prompted by Quick Care to ask another question. If the user says, "No", her session ends with Quick Care.

Task flow C is the base of the "T" shaped-design and responds to inquires about CPR. Quick Care walks the user through 30 chest compressions and rescue breaths. Quick

Care continues to give instructions until the user says, "Quit/Stop CPR". At this point, Quick Care says, "Are you sure you want to stop CPR? Say 'Yes' to return to main dialog. Say 'No' to restart the CPR cycle. Say 'Stop' or 'Cancel' to end the session with Quick Care."

Below are three samples utterances of the main dialog for checking an injured adult, stroke, and choking.

1. Checking an injured adult
User: Start quick care
QC: Quick Care here, what can I help you with?
User: someone is injured
QC: Call 911. Do you need further assistance? Say yes if you need further assistance, and no to quit Quick Care.
User: Yes
QC: Quick Care here, what can I help you with?

 Or

User: Start quick care
QC: Quick Care here, what can I help you with?
User: she is injured
QC: Call 911. Do you need further assistance? Say yes if you need further assistance, and no to quit Quick Care.
User: Yes
QC: Quick Care here, what can I help you with?

2. Stroke
User: Start quick care
QC: Quick Care here, what can I help you with?
User: someone had a stroke
QC: Call 911. Do you need further assistance? Say yes if you need further assistance, and no to quit Quick Care.
User: No
QC: "Goodbye! Thank you for using Quick Care!"

Or

User: Start quick care

QC: Quick Care here, what can I help you with?

User: she had a stroke

QC: Call 911. Do you need further assistance? Say yes if you need further assistance, and no to quit Quick Care.

User: No

QC: Goodbye! Thank you for using Quick Care!

3. Choking

User: start quick care

QC: Quick Care here, what can I help you with?

User: someone is choking

QC: Is the adult unconscious or conscious? Please respond with either unconscious choking or conscious choking.

User: unconscious choking

QC: Call 911. Do you need further assistance? Say yes if you need further assistance, and no to quit Quick Care.

User: No

QC: Goodbye! Thank you for using Quick Care!

Or

User: start quick care

QC: Quick Care here, what can I help you with?

User: she is choking

QC: Is the adult unconscious or conscious? Please respond with either unconscious choking or conscious choking.

User: I don't know

QC: To help the adult who is choking, please respond if the adult is unconscious choking or conscious choking.

User: conscious choking

QC: Call 911. Do you need further assistance? Say yes if you need further assistance, and no to quit Quick Care.

User: No

QC: Goodbye! Thank you for using Quick Care!

Sample Utterances of CPR Dialog

User: start quick care

QC: Quick Care here, what can I help you with?

User: I need help with CPR

QC: Lay the person on a firm, flat surface. You will give 30 chest compressions. Push hard, push fast in the middle of the chest at least 2 inches deep and at least 100 compressions per minute. When you are ready to begin, say 'ready'. When you are done with 30 compressions, say 'done'.

User: ready

QC: Begin chest compressions. When you are done with 30 compressions, say done.

User: done

QC: Give 2 rescue breaths. Tilt the head back and lift the chin up. Pinch the nose shut then make a complete seal over the person mouth. Blow in for about 1 second to make the chest clearly rise. Give rescue breaths, one after the other. Note: If chest does not rise with rescue breaths, re-tilt the head and give another rescue breath. When you are done with rescue breaths, say done.

 User: done

QC: You will give 30 chest compressions. When you are ready to begin, say 'ready' and then when you are done with 30 compressions, say 'done'.

User: ready

QC: Begin chest compressions. When you are done with 30 compressions, say 'done'.

User: done

QC: Give 2 rescue breaths. When you are done with rescue breaths, say 'done'.

User: done

QC: You will give 30 chest compressions. When you are ready to begin, say 'ready' and then when you are done with 30 compressions, say 'done'.

User: quit CPR

QC: Are you sure you want to stop CPR? Say 'yes' to return to main menu. Say 'no' to restart the CPR cycle. Say 'stop' or 'cancel' to end the session with Quick Care.

User: stop

Quick Care: Goodbye! Thank you for using Quick Care!