Group Project F18

Submit Assignment

Due Nov 22 by 17:00   **Points** 100   **Submitting** a file upload

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95712 – JAVA Group Project F18

Chatbots are artificial intelligence-based computer programs which conduct a conversation via text or voice-based input. Siri, Alexa and Google Assistant are examples of programs with chatbot capabilities. The aim of this open-ended project is to develop an AI chatbot for a specific domain. One domain could be *CMUA student enquiries*. You are free to choose the subject area for the chatbot. It could be banking, insurance, health, education among others. See this example: **https://www.cio.com.au/article/640706/university-adelaide-employs-chatbot-handle-atar-score-queries/**   (https://www.cio.com.au/article/640706/university-adelaide-employs-chatbot-handle-atar-score-queries/)

A Typical Use Case

A CMUA student visits the reception with usual questions and types textual input (or talks to) the chatbot program. The chatbot system answers the student appropriately and displays the required information. If the question cannot be answered the chatbot alerts the receptionist.

Basic Specification Guide

1. (20 points) Research and write a report (around 4-6 pages) on the top 3 chatbot development platforms available today. Analyse these platforms and discuss their pros and cons through a comparative framework. In this report you will also discuss the best approach (according to your research) to develop a chatbot in JAVA.

2. (80 points) Using AIML (Artificial Intelligence Markup Language – invented by well-known Dr. Richard

Wallace who has a Ph.D. in computer science from Carnegie Mellon University) and JAVA develop a chatbot for a domain of your choice. AIML is an XML-complaint language designed for creating AI flows and is platform agnostic. For the GUI part of this program you must use JavaFX to build the GUI. See https://www.chatbots.org/expert/richard_wallace/257/ (https://www.chatbots.org/expert/richard_wallace/257/)

3. **Bonus 15 points** - Add voice recognition features to your chatbot. Users should be able to interact with your chatbot through voice (similar to Siri or Alexa).

Project Goals

- The aim of the group project is to get you to research and explore JAVA programming beyond basic exercises.
- This project will also help you to understand the process of using external APIs with JAVA.
- You will also spend time on learning how to write JavaFX based programs in JAVA as well as using the AIML.

Submission

The project must be demonstrated and uploaded by 5pm on Thursday 22nd November.

Submit your Netbeans Project Folder as a zipped file. Demonstrate the system to the TAs.