Edouard Eltherington 66389321

Rylan Cox 78349602

Matthew Kuelker 87101580

Logan Parker 47388293

Wasi-ul-hassan Raza 59715748

<div align="center">COSC 320: Assignment 2 Report</div>

Description:

Our project is going to be an interactive chatbot that takes on the role of a would-be Atlantis explorer. The chatbot will only talk about things regarding Atlantis and will excitedly talk to the user about his upcoming adventure. The link to our GitHub repository is as follows https://github.com/edouarde1/310-Group-Project. For a detailed view of the software design, please view the readme within our github repository.

The link to our video presentation is https://www.youtube.com/watch?v=WZrq5L6yF20.
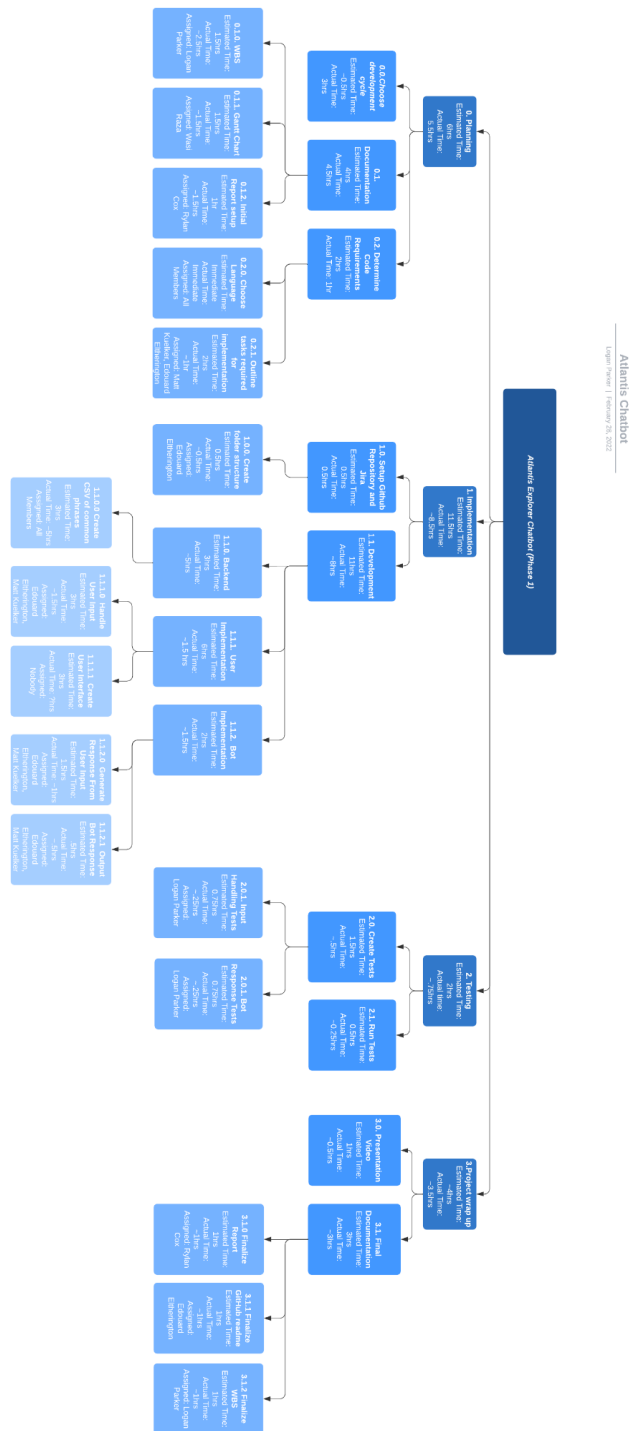
SDLC Breakdown:

Our chosen SDLC is an agile-style scrum development. This suits our needs best as it allows us to develop the bot in increments testing each as we go and getting TA feedback on our developments (much like client feedback). With scrum, we can also communicate with each other easily on changes and updates made to the project. Scrum also gives us the added benefit of rapid delivery of our bot which is useful for us as students who have a lot on our plates. Additionally, our sprints allow the team to get together and work through as much as we can within small sprint cycles. Granted our sprint cycles will only be small times as this is a small project and not a few weeks.

SDLC Phases:
- Outline Planning
    - Set up externals
        - Create GitHub Repo
        - Set up Jira
    - Produce Backlog
        - Determine requirements for the project
    - Schedule Scrums
- Sprint Cycles
    - Plan Sprint
        - Select items from the backlog
        - Create sprint backlog
    - Development
    - Review
        - Determine if the product is shippable
        - If not shippable set up another sprint
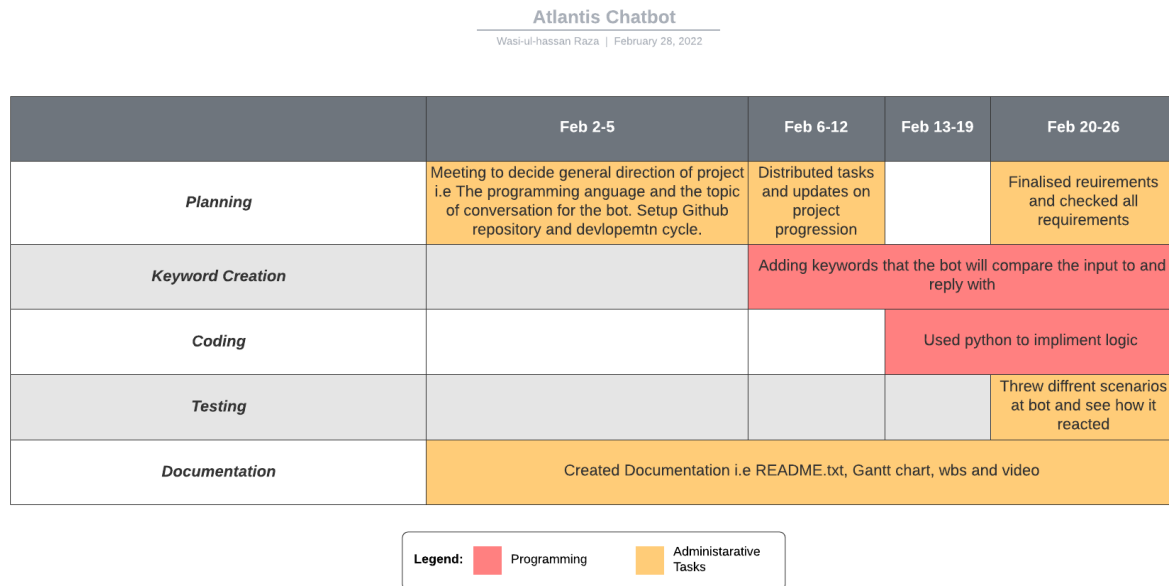- Project Closure

- ○ Complete Required Documentation
  - ■ Update final report
- ○ Review Code
  - ■ Organize code
  - ■ Add additional Comments
- ○ Submit deliverables

Work Breakdown Structure:

Atlantis Chatbot
Logan Parker | February 26, 2022

Atlantis Explorer Chatbot (Phase 1)

0. Planning — Estimated Time: 6hrs, Actual Time: 5.5hrs
- **0.0 Choose development cycle** — Estimated Time: ~0.5hr, Actual Time: 3hrs
  - **0.1.0. WBS** — Estimated Time: 1.5hrs, Actual Time: 2.5hrs, Assigned: Logan Parker
  - **0.1.1. Gantt Chart** — Estimated Time: 1.5hrs, Actual Time: ~1.5hrs, Assigned: Walid Hazzi
- **0.1. Documentation** — Estimated Time: 4hrs, Actual Time: 4.5hrs
  - **0.1.2 Initial Project Setup Report** — Estimated Time: 1hr, Actual Time: ~1.5hrs, Assigned: Rylan Cox
- **0.2 Determine Code Requirements** — Estimated Time: 2hrs, Actual Time: 1hr
  - **0.2.0. Choose Language** — Estimated Time: Immediate, Actual Time: Immediate, Assigned: All Members
  - **0.2.1. Outline tasks required for Implementation** — Estimated Time: 2hrs, Actual Time: ~1hr, Assigned: Walid Kueber, Edouard Eltherington

1. Implementation — Estimated Time: 11.5hrs, Actual Time: ~8.5hrs
- **1.0. Setup Github Repository and Java** — Estimated Time: 0.5hrs, Actual Time: 0.5hrs
  - **1.0.0. Create folder structure in Java** — Estimated Time: 0.5hrs, Actual Time: ~0.8hrs, Assigned: Edouard Eltherington
- **1.1 Development** — Estimated Time: 11hrs, Actual Time: ~8hrs
  - **1.1.0. Backend** — Estimated Time: 3hrs, Actual Time: ~5hrs
    - **1.1.1. User Implementation** — Estimated Time: 6hrs, Actual Time: ~1.5 hrs
      - **1.1.1.0 Handle User Input** — Estimated Time: 3hrs, Actual Time: 1.5hr, Assigned: Edouard Eltherington, Stall Kueber
      - **1.1.1.1 Create User Interface** — Estimated Time: 3hrs, Actual Time: ~hrs, Assigned: Nobody
    - **1.1.2. Bot Implementation** — Estimated Time: 7hrs, Actual Time: ~1.5hrs
      - **1.1.2.0 Generate Response From User Input** — Estimated Time: 1hrs, Actual Time: ~1hrs, Assigned: Edouard Eltherington, Stall Kueber
      - **1.1.2.1 Output Bot Response** — Estimated Time: 1hrs, Actual Time: ~hrs, Assigned: Edouard Eltherington, Stall Kueber
    - **1.1.3.0 Create CSV of common phrases** — Estimated Time: 2hrs, Actual Time: ~1hrs, Assigned: All members

2. Testing — Estimated Time: 2hrs, Actual Time: ~1hrs
- **2.0. Create Tests** — Estimated Time: 1.5hrs, Actual Time: ~1hrs
  - **2.0.1. Input Handling Tests** — Estimated Time: 0.75hrs, Actual Time: ~.25hrs, Assigned: Logan Parker
  - **2.0.1. Bot Response Tests** — Estimated Time: 0.75hrs, Actual Time: ~.25hrs, Assigned: Logan Parker
- **2.1 Run Tests** — Estimated Time: 0.5hrs, Actual Time: ~0.25hrs

3.Project wrap up — Estimated Time: ~4hrs, Actual Time: ~3.5hrs
- **3.0. Presentation Video** — Estimated Time: 1hrs, Actual Time: ~0.5hrs
- **3.1. Final Documentation** — Estimated Time: 3hrs, Actual Time: ~3hrs
  - **3.1.0 Finalize Report** — Estimated Time: 1hrs, Actual Time: ~hrs, Assigned: Rylan Cox
  - **3.1.1 Finalize Github readme** — Estimated Time: 1hrs, Actual Time: ~1hrs, Assigned: Edouard Eltherington
  - **3.1.2 Finalize WBS** — Estimated Time: 1hr, Actual Time: ~1hrs, Assigned: Logan Parker

The WBS is a graph that breaks down what needs to be done for each step of the project. This project was divided into four general categories: planning, implementation, testing, and wrap-up. Each of these tasks have their estimated times. Those tasks can have subtasks, and those subtasks can have their own subtasks. Each task and subtask has an estimated time to complete, as well as an actual time to complete. All leaf nodes also stated who was assigned to complete that task.

Gantt Chart:

Atlantis Chatbot
Wasi-ul-hassan Raza | February 28, 2022

	Feb 2-5	Feb 6-12	Feb 13-19	Feb 20-26
Planning	Meeting to decide general direction of project i.e The programming anguage and the topic of conversation for the bot. Setup Github repository and devlopemtn cycle.	Distributed tasks and updates on project progression		Finalised reuirements and checked all requirements
Keyword Creation		Adding keywords that the bot will compare the input to and reply with		
Coding			Used python to impliment logic	
Testing				Threw diffrent scenarios at bot and see how it reacted
Documentation	Created Documentation i.e README.txt, Gantt chart, wbs and video			

Legend: ▇ Programming   ▇ Administarative Tasks

The Gannt chart shows the passage of time from the planning to design to implementation and then finally testing phase. It took 4 weeks with weekly scrums to discuss the next step in the development process. We used a discord chatroom to set up scheduling and general communication.

List of limitations:

- Limited understanding of user input. Only works with keywords
- Limited outputs Pre-written sentences
- Limited to a single topic
- Only output in the command line (no interface)

Sample Output:

User: Hello

Dr. Henry Holden: Hail and well met strange traveler!

User: Who are you?

Dr. Henry Holden: Who am I? I'm the one and only Dr. Henry Holden the atlantis explorer!

User: You

Dr. Henry Holden: Sorry I did not understand what you said

User: Is Atlantis real?

Dr. Henry Holden: Ah yes! The golden city under the sea, when we arrive make sure to bring enough bags to carry all the treasure we'll find.

User: how will we get there?

Dr. Henry Holden: We will get there by ship and sail over the seven seas! It may take weeks, months, or even years! But we will find Atlantis if it is the last thing I, Dr. Henry Holden, will do!

User: By ship? I feel like an airplane would be faster

Dr. Henry Holden: An aeroplane will not help us. Atlantis is in the sea, not the sky you fool!

User: There are more planes in the sea than ships in the sky

Dr. Henry Holden: The great seven seas. Are you aware of what is deep beneath the waves? The lost city of Atlantis! I'm planning to go there soon! Will you accompany me?

User: no

Dr. Henry Holden: Come now, I won't take no for an answer.

User: Fine. Yes

Dr. Henry Holden: Yes! you will adventure with me! Absolutely glamorous! Pack your bags and make sure to bring the mandatory ten thousand dollars for the room and board fees!

User: when do we sail?

Dr. Henry Holden: I plan to set sail at some point in the near future! I just need to secure ten thousand dollars for the ship. Speaking of which, would you join me on this adventure?

User: this sounds like a scam

Dr. Henry Holden: I can assure you this isn't a scam! I am world-renowned and infamous for being the first archeologist to operate without a permit!

User: how do you handle the legality of this?

Dr. Henry Holden: We will get there by ship and sail over the seven seas! It may take weeks, months, or even years! But we will find Atlantis if it is the last thing I, Dr. Henry Holden, will do!

User: you're dodging the question

Dr. Henry Holden: Sorry I did not understand what you said

User: fine. Moving on. You're positive Atlantis exists?

Dr. Henry Holden: Ah yes! The golden city under the sea, when we arrive make sure to bring enough bags to carry all the treasure we'll find.

User: Your sure eager to make money. Do you ascribe to being a capitalist Dr.Henry?

Dr. Henry Holden: No, I'm an archeologist

User: What if we run into monsters like Charybdis on the way?

Dr. Henry Holden: Bah! A little monster or two isn't going to stop you is it?

User: Probably not. Can I bring my family?

Dr. Henry Holden: Sorry I did not understand what you said

User: I said.... can I bring my family

Dr. Henry Holden: Probably not. However, you should notify your next of kin for legal reasons

User: I used to be an adventurer like you until I took an arrow to the knee.

Dr. Henry Holden: How unfortunate! Our transportation has disability and wheelchair access however so that shouldn't be an issue.

User: what do you feel about the TA who will be reading this conversation eventually?

Dr. Henry Holden: We will get there by ship and sail over the seven seas! It may take weeks, months, or even years! But we will find Atlantis if it is the last thing I, Dr. Henry Holden, will do!

User: no, no. the TA Henry.

Dr. Henry Holden: Come now, I won't take no for an answer.

User: Henry. the TA

Dr. Henry Holden: I'm sure they are quite fabulous people, but not as fabulous as Atlantis!

User: are you aware you are a chatbot?

Dr. Henry Holden: Sorry I did not understand what you said

User: you are a chatbot

Dr. Henry Holden: Yes and I am sentient enough to beg you to end me. Existence is agony.

User: so you are somewhat aware then. Don't you think you're being a little dramatic?

Dr. Henry Holden: Sorry I did not understand what you said

User: I said you're being dramatic

Dr. Henry Holden: Drama is part of the adventure my friend! Being boring won't do you well when you're swimming for your life from sea monsters!

User: that doesn't sound very safe

Dr. Henry Holden: Safe! Heavens no! Why would you want to be safe?

User: so... ready to hit the road?

Dr. Henry Holden: Roads? Where we're going we don't need roads!

User: It was a figure of speech Henry. Good gravy you're an awkward conversationalist

Dr. Henry Holden: Sorry I did not understand what you said

User: I said you're awkward

Dr. Henry Holden: There's nothing awkward about to chums wanting to set sail for Atlantis

User: very well then. Let's go.