CSC3003S Capstone Project — Stage One

Goals (Scope) [21 Marks]

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| Project Abbreviation and Name | PTJP – Public Transport Journey Planner |
| Client/Supervisor + email | Jan Buys jan.buys@uct.ac.za |
| Tutor + email | Jane Imrie IMRJAN001@myuct.ac.za |
| Date | 2022/08/01 |
| Team Members | Student Number, First and Last Name, email |
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| Overall purpose and stakeholders [5] | The purpose of this application is to allow users to be able to find transportation to their desired destination from a given start point, either within or including destinations outside of Cape Town. Users will be able to identify their starting point of the journey and their end point, identifying either their desired starting time or departure time of the trip. This application will allow for different modes of transportation to be identified, but mainly focused on journeys within Cape Town and via bus, but destinations outside of Cape Town may be available and although the bus system is the main mode of transportation that will be prioritized, other transportation systems may be included, such as trains. It is the aim of this application to allow ease of organization for the user’s journey that provides them with maps of the available routes and provide them with available options of trips that meets their specifications. The application will prioritize trip planning by shortest time of the trip, with minimal connecting modes of transport that is most appropriate for their arrival or departure times. The stakeholders in this application include the client, Dr Jan Buys, the users of the software for transportation and us the project team. |
| SMART Goals [5] | The aim of this application is to allow users to find and book trips from one destination to their desired destination. Users will therefore be able to search a trip, by entering the place where they would like to be picked up from and the destination of where they would like to be dropped off. They will also specify either their start time for the trip or the time they would like to arrive at their destination. The application will then supply them with available modes of transport, including connecting trips within Cape Town, to meet either their start or end time.  Specific goals: The application should be able to upload the timetable and routes within Cape Town that contain all bus routes. It should be able to find the closest starting or destination stations of the trains that will allow the user to get from their starting to point to their desired destination, meeting either the user’s start or end time.  Measurable goals: The goals that can be measured are to ensure that the bus routes and timetable can be save and used to find appropriate bus trips. Another goal is to ensure that suitable trips that meet the start and end destinations and times.  Agreed Upon goals: Agreed upon goals include that at least the method of bus transportation will be used to find trips for the user and that the trips will be throughout Cape Town. The application will also ensure that connected bus trips are provided if needed to ensure that the required times are met and that the most efficient trips are provided.  Realistic goals: Realistic goals include finding appropriate modes of transportation to get the user from their start to end destination meeting their required inputted times. It also includes providing connected transportation where required to get the user from start to end destination.  Trackable goals: Trackable goals include correctly storing the transportation modes and their relevant routes and being able to use these routes and timetable to find appropriate trips to get the user from their start to end destination. Trackable goals also include being able to find trips that start or end according to the times supplied by the client. These goals can be tracked by testing the application at certain times when they are required to be completed to ensure that the progress of the application is according to plan. |
| Inputs, outputs and performance [5] | The user will select (input) their departure station, destination as well as their departure time or arrival time (or both). As output, the user will receive the best route to their destination which coincides with their preferred times. This route may include swapping trains at a station. The response time doesn’t need to be extremely fast, but it should be relatively quick to avoid delay. |
| Resources and Constraints [3] | We shall use GitLab to work on the programming together effectively and WhatsApp for easy communication.  We only have 8 weeks to finish this project. The application will be web-based, meaning a secure internet connection will be required. It will not require too much memory or any supporting software. |
| Feasibility [3] | This project is feasible as all the necessary resources are free and it is achievable in 8 weeks if we plan well and keep up to date on what we plan to achieve each week. |

# Instructions:

1. Replace any text on the right-hand-side column with information about your project.
2. Notice that there is no indication of how the inputs are transformed into outputs. There is no schedule either. That would be too much detail at this stage. We want only the “what”, not the “how” or the “when” just yet.
3. If something is not applicable to your project, state this and explain why and provide some other relevant and appropriate information. Don’t leave any blanks.
4. Submission is on Vula. Remove these instructions from your submission.

# Follow-up

1. Bring this document to your next meeting with your client (or email it to them beforehand) and ask if it adequately represents the project. The “overall purpose” and “goals” sections are most important in this regard.
2. Resolve and note the solutions to any issues you might have about feasibility.
3. If the client is satisfied then please **ask them to sign off on this**. Otherwise arrange a revision and time to meet to sort out the issues.
4. Note that your mark will be determined by your first submission.