



ECSE 456 - Turbodega

Project Supervisor: Professor Daniel Varro (daniel.varro@mcgill.ca)

Meetings scheduled on Mondays at 5:00 PM at Armstrong, 3rd floor

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Date	Summary of Topics
September 5, 2018	Introduction to the project and decided on collaborative tools and medium to be used throughout project.
September 12, 2018	Formulated ideas for the mobile app creation - login by location, four main divisions (inventory with initial costs, registering sales, receiving products and purchasing orders).
September 19, 2018	Project was divided into two parts. Part A: User Record sales, suggest order, either accept or reject bid, and then confirm final decision. Part B: Logistics/Distributor Collect order, bid based on price, group bid confirmation, and then send to a delivery partner. Team DP03 was assigned to do Part B.
September 26, 2018	Presented Business Process Model and Notation (BPMN) of Part B and received feedback from the advisors. Decided to switch from mobile application to web page for the convenience of the distributor (Part B of the Turbodega project).
October 3, 2018	Presented the landing page of the web page from the distributor point of view to the advisors. Received the list of products for the web page catalogue section and distributed task for the next week among the team members.

Table 1: Group Meetings and Meetings with Advisors

Engineering Tools

Turbodega being a software project, our needs in terms of hardware are limited to our personal computers. Software-wise, since we've moved to develop a web application instead of a mobile app, there are a few changes to our tooling in terms of the libraries we will need to be working with. We will still be using GitHub for version control and monitoring our overall progress since it is a tool that most of us are familiar with and that is widely used in the industry for both version control and project management.

For building the client-side of the application, since we do not have much experience with web development, we have asked our advisor, Professor Varro, to provide us guidance on what should our tech stack look like. Among the options given, i.e. React and Vue.js, we decided to go with React for its prevalence (more documentation to be found online) and the fact that it was actively supported by Facebook. We are also planning to use Bootstrap to help us with the layout of the application as it is easier to use than simply going with CSS.

Concerning the server-side, among the choices we were given, i.e. Node.js, Vertx.io and Spring, we have so far settled on Node.js for its ease of use and its prevalence.

Team Work

Our plan for sharing the work as a team is to divide the workload equally, meaning, since we are creating a website containing many pages, each member will be responsible for a web page. At the moment, it is decided that the landing page will be divided into two parts such that Aliah will set up a login page, while Thusha will set up the homepage. Then, Yahya will set up the bidding page, Nabil will set up the bidding history page and Aliah along with Thusha will set up the catalogue page. In addition, each member will take turns updating the minutes document and have individual parts to cover for every report that is to be submitted. Communication is managed between team members by scheduling weekly meetings every Monday evenings and for other inquiries, it will be through Slack and Facebook messenger. Furthermore, to collaborate our work, all written work will be managed on Google Drive and Overleaf for review and edit, while GitHub will be used for setting up our website and finalizing every work, so the supervisors can keep track of our progress.

Impact on the Environment

Since this is a project that at its core involves web development, there will not be any direct impact on the environment throughout the development stage. There may be some indirect impact through the energy use from using computers, but that will be minimal. There will be testing phases throughout the development stage. Suppliers will start trying the website and incorporate it into their day-to-day business of supplying products to their customers. Distributing products require the use of energy from transports. However, again here the effects of the project itself will be minimal as it does not really differ from the business regular activities. However, once the product has been fully marketed, in the ideal case, there will be an increased efficiency in distribution leading to faster and greater volumes in the supply of goods. This will lead to two possible scenarios. One, where there will be less use of energy to deliver more goods due to the increased efficiency of distribution. The other is that a possible wide-scale adoption of the project product will lead to a significant increase in supplies, which in turn leads to greater use of energy. Higher energy consumptions will indirectly impact the environment from the production of energy. It must be noted that is not entirely possible to predict which scenario will happen until the product is actually marketed.

Ethics and Equity

We did not encounter any ethical dilemmas during this project nor dilemmas related to equity as of now. Nonetheless, there are some possible issues that one may encounter in this kind of project. For instance, if not everyone is willing to pull the weight of the project. This is to say that every member of the team

should equally take part in the project and fulfill their responsibilities properly. This can lead to a failure in reporting the true progress of the project to the supervisors in fear of repercussions. Hence, it is important to be completely truthful about the progress of the project to our clients and keep up with the timeline. Also, it is possible that conflict can arise among members due to differences in opinion. This should be negotiated professionally without taking anything too personal and come to a conclusion that benefits every member and respecting everyone's interests. Furthermore, being accountable is important since when things go wrong, it is human nature to try to avoid the consequences and perhaps blame someone else. What can be concluded is that dilemmas may arise when working in this kind of project, so we should support each other and solve the problems together.

Life Long Learning

This project involves heavy use of programming and web development skills. The project team members consist mostly of electrical engineering students who have not taken a lot of computer and software engineering courses. Therefore, it is found that proficiency in HTML among team members need to be increased and acquired. Aside from that further learning of the procedure of web development itself must be learned. From the use of bootstrapping, management and CSS will also have to be learned. Later on, mathematical and coding knowledge on building a system that can sort, manage and handle bids and orders must be learned. Aside from technical skills, other skills that need to be improved and mastered are time-management, project planning, and organization. It was identified early on that it was difficult to find a consensus on how to start the project itself. The team was stuck on figuring out the key problems that need to be done first or even the skills and technology necessary. This has gotten better however definitely can be improved upon.

Recent Progress

Since the first meeting of Turbodega with the fellow advisors, a lot of changes had been made. Firstly, the team had to switch gear from developing an Android application to developing a website to be accessed and used by the product distributors of Turbodega clients. Firstly, the team has to sort the orders received from all the small grocery stores in a particular region according to their categories. Secondly, we have to create a website for the distributors to see the lists of orders, before they can bid on the price they want to set for selling their goods to the grocery stores. The website is expected to run each bid for a maximum of 48 hours and the distributor who bids for the lowest price will win the bid. Before developing the actual website, a flowchart is created using the Business Process Model and Notation standard was created and presented to the advisors. After receiving the feedback and approval from the advisors, we started developing the website. The first two pages that the team developed was the home page and the login page for the distributors and they were presented on October 3, 2018. Some changes have to be made, mainly the logo of the company and a signup page needs to be added. After figuring out the list of important pages that needs to be developed, we distributed the tasks according, as mentioned in Team Work section and the pages are expected to be working independently by the next meeting on October 10, 2018.

Future Plans

For the next project report, we are planning on having the client-side of the application ready to be field-tested and start getting familiar with Node.js.

Specifically, by October 10th, we should have a draft of the webpages ready, then by October 15th, all the webpages should be hosted on a the same website and link to each other. By October 22nd, the client side should be ready for field-testing and by October 29th, we should have started going over Node.js tutorials to get familiar with the framework.