

Project Plan - Advanced Software Engineering (Group 3)

Organisation Plan

- The group will be organized using a leader and a vice leader structure. The role of the leader will be to communicate between the client and the engineers. This will enable the team to understand what the client requires, and the client to understand what the team is able to achieve.
- The team leader will be Dominik Wasilewski and the vice team leader will be Alex Karpeichyk, who will be appointed as the leader in case of any emergencies. If neither of these will be present, the team will vote on who will become the next leader.
- The internal structure of the team shall be horizontal. Meaning decisions which affect the entire project will be left to a vote. However, decisions which affect a specific individual's task, are made by the owner of that task, unless challenged and a majority of the remaining members agree with the challenge.

Software development in this project shall be done in 5 day sprints. Each engineer will be assigned specific tasks in these. In case of a task not being completed, the engineer will be expected to complete the previous and current sprints tasks before the next time period. This will then be monitored closely by the rest of the group to ensure it is completed. If the member is unable to, other members of the group will pick up their tasks.

- Angular with NativeScript is the main framework for development.
- Trello is used for miscellaneous work such as management or recording tasks for completion.
- Jira is used for task time tracking such as sprints and points.
- Git is used for version control.

Our team is divided into three subteams for a division of labour/skill. Within the team, there are two members with industry experience (experts) who have been split up in order to help mentor less experienced members.

Team Split

Front End: *Charalambos (Harry), Dominik*

Mid-Back End: *Aliaksandr (Alex), Arindum*

Data Analytics: *Ben, Tashi*

Expert Role

Arindum, Charalambos (Harry)

Conflict Resolution Plan

If there is a conflict about how best to solve the client's requirements:

- If it is unclear within the team which solution is best, the client will be consulted for their opinion.
- For situations where this would be unprofessional, the team will vote. In case of a draw, the team member's vote who is completing the task will be given priority.

If there is a conflict such as code implementation:

- The person that doesn't agree with the implementation has to convince the rest of the team that there's an issue.
- In the event if the team is convinced with the arguments, the person on the task has to at least consider the arguments and making changes to the implementation.
- If the disagreeing party fails to convince the team, the person on the task is free to continue with own implementation.

If there is a conflict in peer assessment:

- The person that doesn't agree has the right to freedom of expression.
- The other team members then vote accordingly or discuss until an agreement is established.

If there is a disruptive event such as a member dropping out or being unavailable:

- The member is contacted by the group.
- If no solution is found, reassign the dropped out member's tasks and take points.
- If the disruptive event is permanent (e.g.: member drop out), then the remaining project tasks of that specific member have to be reassigned by discussion and voting.

If a team member cannot complete their assigned tasks to schedule:

- Other team members will try to support the team member by mentoring and monitoring them.
- If the team member continues to fall behind, other team members will take up their tasks and peer assessment will be affected.

Peer Assessment Plan

Peer assessment will be measured quantitatively and qualitatively:

- Quantitative assessment will be done via a point system, where members are rewarded points for completing tasks in each sprint. The amount of points awarded for completion of each task in a sprint will be agreed by the team before the sprint. If at the end of the sprint, the task turned out to be easier/harder than expected, the team member can explain this to the rest of the group and the number of points awarded can be adjusted on the team's discretion. The points will be stored electronically using tools like Jira, Trello etc.
- Qualitative assessment will be done via discussions to determine how much each member has contributed qualitatively (e.g. commitment, problem solving, progroup-proactive behaviour). These discussions will take place in meetings 3 weeks before completion of the task, and at the end of the project. Points will then be added to each member's quantitative point tally based on their qualitative contribution. If there is a disagreement, each member will vote on how many qualitative points should be added to each member's quantitative points and an average will be taken.
- The total points a team member acquires during the project will represent their contribution (peer mark).

The group recognises an ideal situation would be to split the grades evenly. To this end we will create tasks appropriate for each individual ability to allow them to catch up to points of other members if they fall behind. Only in the situation of refusal to complete these tasks should a group member have marks taken away in peer assessment. All engineers will have to agree on and sign off the final peer assessment point split before concluding the peer assessment stage.