**SHWOZ**

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Railway Train System Simulation

Risk Assesment

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There are three categories of risks involved in this project. The level of risk is determined by the probability of it happening multiply by the severity of the problem if it happens.

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| Title | Risk Level | Risk Description | Reducing Risk |
| Lack of Communication | Low | The lack of communication between team members may cause misunderstanding on the project, it will have negative impact on delivering the project on time and the project meets all the requirements. | To reduce the risk, alongside the recitation, the team will have two meetings every week and regular group chat on Skype to share information for the project development progress. |
| Team member falling behind schedule | Medium | If a team member falls behind the project, it may cause project getting stopped from going to the next phase. | To reduce the risk, during the weekly meetings, every team member will report on their current progress, if someone is falling behind schedule, other team members can come in early before he or she falls behind too much. |
| Program failure on a different system | Medium | Since the team members have different operating system on their computer, it may cause trouble that the outcome project cannot run on the required system (windows 7). | To reduce the risk, any team members who does not write the system on windows 7 will do unit tests on their module periodically to make sure that their code works on windows 7. |
| Team member leaves the project | High | If a team member got sick or any for any other reasons, has to drop out of the project, this would be a big problem for the team since the schedule can’t not be followed anymore and the part will be left undeveloped unless other team members got time to do something with the module. | To reduce the risk, each module should be developed with certain basic functions first, thus even when the module is not fully developed, it can still talk to other modules. |
| Running out of time on project | High | This System is very complex and leaves room for failure due to time constraints. It may happen that we may not deliver the project. | To reduce the risk, the team will plant in a period of buffer time into the schedule towards the end of the project to make sure that there is some extra time for us at the end of the project if we follow the schedule but still have some tasks unfinished. |
| Data lost | High | If for any reason like system failure or crash, all data stored in computer is lost, we may lose all the progress saved before, this will have a great impact on the project development process. | To reduce the risk, each team member will upload their modules online to cloud server regularly, thus even with some data loss, the damage will be minimalized. |
| Personal shortfalls | High | I am an EE student so my coding skill may not be as good as other COE students, I need to catch up with the tight process and since it’s a challenging project, this lack of my coding skill may cause problems including not being able to delivery packages on schedule, program being insufficient etc. | The risk can be reduced by adding extra training time into the project, current estimate training time is 20% of total development time. |