**Report**

**Scrum**

Scrum methodology is an iterative, incremental process that emphasis on delivering quality working software in the shortest time. Iterations in this methodology is named as Sprints.

**Sprint**

Our team decided to set the iteration sprint to 3 weeks.

Advantages:

* Save Time

Working software can be delivered every 3 weeks. A few parts of the software is completed and can be delivered to product owner within short time. We can code and deliver the most important functions first and add more functions on the next sprint.

**Conduct Daily Scrum Meeting**

Scrum master hosts a scrum meeting which takes approximately 15 minutes every day. All team members must attend this meeting. They have to tell others what they have done, what they plan to do and the problems faced.

Advantages:

* Clear Visibility of the Project Management

Regular meetings throughout the sprint enable members to update the progress of work frequently. Any problem regarding software or team members can be spotted easily and scrum master can plan to make correction immediately.

* Better Decision Making

Communication between team members leads to better decision making. All members in the team have the chance to express their opinions. Their opinions will be discussed in the meeting. Effective communication in the team is important for scrum master to make right decision.

**Conduct Sprint Review Meeting**

Meeting that is conducted after a sprint.

Advantages:

* Better Meet Stakeholder Requirements

Constant feedback from the team, product owner, scrum master and any other interested stakeholders make the requirements clearer and the software produced will meet requirements of different viewpoints.

**Continuous Integration (CI)**

CI provides clean build of system several times per day.

Advantages:

* Automating processes that reduce risk and bugs

CI includes automated compilation, unit testing and source control integration. The problems of codes can be discovered in the tests that run regularly. CI tools will flag up the error that occur during integration.

**Pair Programming**

There are at least two members work together as a group on the same function throughout our development process.

Advantages:

* Time efficiency and quality codes

Pair programming more time efficient compare to individual programming. The outcome of pair programming achieve higher quality than individual programming also. There are less bugs since there is a partner to check and modify the code.

**Simple Design**

We keep the design of the Taxi System as simple as it can.

Advantages:

* No wasting of resources

Our team only work for the functions that requested by product owner and other important viewpoints. We do not waste time, money and man power to develop extra functions that are not required.

The techniques and practices of scrum enable our team to deliver a quality software system in 6 weeks’ time. In sprint planning, all tasks are well planned and we are able to complete the tasks following the plan. However, when there are changes requested, we can adapt to the changes quickly also as daily scrum meetings lead us to the right position. We can always keep ourselves up-to-date with the changing requirements. As we can adapt to changes rapidly, it reduced the chances of making mistakes and reduced the development time. The continuous integration that can be done by automated tools required less time compared to manually build and test of system by human.

**How We Work Together as a Group?**

Once we are in the project team, we are treated as a whole. In scrum, there are no individual success and individual failure. As a group, we always cooperate with one another to accomplish the tasks. When a team member faced problem, other members will discuss for solution together to solve the problem as fast as possible. We have to make sure that all members are keeping the same pace. If any of the members is going behind schedule, other members must lend a hand to that member.

**Disadvantages of Scrum**

* Required experienced team members

If there are novices in the project team, they need times to get used of the techniques and practices of scrum process as it is very different from traditional development methodology. Furthermore, novices might not able to complete tasks in short period of time. They might not able to keep up with the pace of experienced team members.

* Does not work well in large team and complex system

Scrum methodology is suitable for small project. If developers want to develop a large and complex system with scrum methodology, it is possible to fail. It is very hard to produce a large and complex system in short time frame. If add more members to the team to achieve higher productivity, it may cause communication problems. When there are too many members in a team, conflict may occur easily.

**When to Use Scrum in Future Project?**

* Limited development time
* Small project
* Responsible team members
* Sufficient expert
* Changing requirements

**Situation That Not Suitable to Use Scrum in Future Project**

* Large and complex project
* Majority of the development team are novices
* Team members are not committed