

# SSW 555: Agile methods for Software development

## Homework 3: Scrum for the Automatic parking Application

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### 1. Provide an overall description of the Scrum process and roles.

**Ans:** Scrum is a process framework that assists group with co-operating. For example, for automatic parking application, preparing for the major event, scrum urges groups to learn through encounters, self-experience while taking a shot at an issue, and consider their successes and misfortunes to consistently improve.

Scrum process is divided into five following phases:

- I. Initiate: In this stage product owner and stakeholder are identified and project vision and prioritized product backlog is created. Also, Length of sprint and Planning schedule decided in this phase.
- II. Plan and Estimate: In this stage user stories are created and then according to customer requirements stories are approved, estimated, and committed. And in next step these stories are broke down into specific task and complied into a list.
- III. Implement: As the name suggest, in this phase all the tasks and activities such as daily stand up meetings, creating the various deliverables and regular updates-are executed to get final product
- IV. Review and Retrospect: This phase is concerned with reviewing the work that has been done and determining the different prospective to enhance the methods which are used to complete the project and that can be applied in next sprint.
- V. Release: This phase emphasizes on conveying the acknowledged deliverables to the client.

There are three different roles which play a very essential and the most important part.

**Product owner:** The product owner examines and discusses the objectives of the automatic parking application such as enhance the security, parking space that the sprint ought to accomplish and it is the obligation of the product owner to guarantee that they are conveying the foremost esteem. He tells the advancement what is vital to provide. The product owner has a not only vision for the esteem but also, he equalization the requirements of other partners within the organization.

**Development team:** The development team is the group of people who are responsible to deliver the work through the sprint. Developer is a part of the group who has the proper abilities, as portion of the group to do the work. Person advancement group individuals may have specialized aptitudes and region of centre, but responsibility has a place to the improvement group as an entirety. They meet

daily on stand-up meetings which provides straightforwardness to the work and helps them as a group, to review and adjust the work they are doing and work in a more compelling way.

**Scrum master:** The scrum master is the person who is mindful for sticking everything together and guaranteeing that scrum is being done well. Scrum master aid the product owner for characterize value, the development team deliver the esteem. He could be a hireling pioneer which describes what they do on a day-to-day premise.

**2. Explain the planning process for Sprint 1. Who is involved? What are the work products? What are the roles and deliverables of each participant? Who delivers what and when?**

**Ans:** During sprint planning, prioritized plan creates by the team, which helps to achieve a final product and meet the decided goal. In the sprint planning product owner, development team, and scrum master are involved. In this planning they defined sprint goal and sprint backlog. Product owner identified all the requirements such as for automatic parking application enhance security, booking for parking slot, efficient garage energy, park more vehicles with the least space possible, etc in the starting of the sprint. Development team identifies the task which are needed to accomplish the requirements and make a task list and calculate the approximate time required to complete that task which is less than the sprint duration.

**3. Describe what happens, day to day, during Sprint 1. Who is involved? What are the work products?**

**Ans:** During sprint, day-to-day stand up meeting take place at anywhere in workspace which is short time inspect and adapt activity. Mostly Scrum master and development team are part of this meeting, and for product owner this is optional. Scrum master ensures that the development team has the meeting, but ultimately meeting is run by development team. They discuss on mainly three points, what did they do yesterday, what will they do today and is there any interrupts which prevents the progress of whole team to meeting the sprint goal.

**4. Describe what happens at the end of Sprint 1. Who is involved? What are the work products?**

**Ans:** At the end of the sprint product owner, development team and scrum master all are involved. At the end of the sprint whole work is visualized and inspect the advancement and adapt the product backlog. Product owner set the priority according to which decides the tasks which will done in next sprint and modified some feature according to requirement. Development team make a list what will they have to do in next sprint.

**5. How does the team measure progress?**

**Ans:** Progress of the team will be measure by Burn down chart and team velocity. which is diagrammatic representation of the work which is completed and remaining. This is maintained by development team and managed by scrum master. This graph is remaining work verses time, which helps to predict when the project will be

completed with all features. Slope of this graph represents estimated and actual velocity.

**6. How and when can the team adjust priorities? Who sets the priorities? When can changes be made?**

**Ans:** In the sprint planning meeting priorities can be adjusted by the **product owner**. Which task needs to be completed first means the task with the highest scope receives highest priority compared to other tasks so that it results in a list which shows the record of tasks according to priority. Changes can be made by the development team when the sprint review meeting is over.