**ASSIGNMENT-7**

**1.Consider the user story: “As a customer I want to use ATM”. What would be my acceptance criteria (“so that......)”? List all possible acceptance criteria**

Ans:

Acceptance criteria for using an ATM:

* Any transactions (withdrawal, deposit) should be notified to me almost immediately.
* My ATM card should be compatible with any/all/most banks.
* I should be able to change my ATM pin whenever I want to.
* I should be able to view the ATM interface in any widely spoken languages.
* It should remind me to take my card after every transaction.

**2.What are the advanced Scrum Master skills?**

Ans:

### **Conflict Resolution**-One of the challenges any ScrumMaster, Facilitator, or Coach faces is dealing with conflict. He should take care of all conflicts that arise among the team,ie the role of a mentor

### **Selling Agile Throughout the Organization**-A Scrum Master with an advanced skill set should be able to sell the mindset of agile in the organisation he/she is involved in. Many people may not accept this immediately, and the scrum master should be able to answer to “What’s in it for me?”

* **Ensuring scrum rules**-The scrum process is to be strictly followed and guided by the scrum master.

### **Managing Stakeholders**-While the Product Owner has the primary responsibility of working with stakeholders and translating their goals and needs to the team, the ScrumMaster is also part of that process. Clearing obstacles, clarifying dependencies, and communicating progress to the stakeholders all come into play.

* + - **Removing impediments**-All the problems arising,related to the project development in the team are solved by scrum master

### **Fostering a Continuous Improvement Culture**-An advanced scrum master should share a plan for specific team’s continuous improvement and also describe ideas for organizational continuous improvement

* + - **Developing and managing the scrum team**-He is responsible to control and guide the scrum team,by giving necessary advice and instructions.
    - **Estimation and planning**-He creates useful and reliable plans for the software development project.

**3.How do you think you can use Agile practices in large projects? (Given that the team can have no more than 9 people, do you think large projects with large teams can be involved in agile practices?)**

Ans:

We can use agile practices in large projects by using the method called **Scrum of scrums** .In large projects it is not practical to have a stand up meeting for everyone,which might be more than 100 people.So inorder for that each scrum is divided into further more and a person is selected from each scrum and attends the main meeting discussing their problems and development.But if we consider that all these groups will be working on the same product, we will still certainly have a lot of problems. A few techniques to resolve this problem:

**Replicate the key roles** in each of the teams, such as the PO, ScrumMaster, and technical lead.

**Align the iterations**. Each team has a specific velocity, production capacity, and learning curve. Aligning the start and the end of a release iteration in a time-box makes the teams free to perform as many iterations as they need. The difference is that the teams are aligned in the project milestones, finishing all the iterations together and making it possible to, for example, plan the deployment of a new version of the product on a specific date.

If the number of people in each team is limited to 9, then large projects can be executed using Agile practices (Scrum of Scrum).

But if this number exceeds 9, it would be a daunting task to manage the team and difficult to deploy planned releases.

**4.****What are the Possible options for tracking project performance in Agile?**

Ans:

A project in agile can be measured with certain features

* **Velocity:**It is a metric that predicts how much work an Agile software Development team can successfully complete within a time-boxed period.Velocity is a useful planning tool for estimating how fast work can be completed and how long it will take to complete a project. The metric is calculated by reviewing work the team successfully completed during previous sprints.

Example: if the team completed 10 stories during a two-week sprint and each story was worth 4 story points, then the team's

**Velocity =10\*4=40 story points per sprint.**

* **Hit rate:It** is the percentage of work allocated to a Timebox that was actually completed.

Example:if a team aimed for 100 Story Points of User Stories, but ended up only completing 78 Story Points, their

**Hit rate =(Obtained story points/expected story points)=(78/100)\*100=78%.**

* **Work remaining on task:**The team estimates the work remaining on each active Task on a daily manner.The estimate of work remaining Task will go down over time.But if the task is more complicated then this factor may rise than we expected. This is where the data for the Timebox Burn Down Chart come from.
* **Project cost:**In most organisations the cost of a project must be tracked to ensure it does not go over budget. Since you’re tracking on it you may as well report it.
* **Burndown charts**-work to be done is specified on a chart. When certain tasks are completed,they are removed or marked off from this chart., which is called a burndown chart. It aslo helps to determine the project progress.

Also, there are certain other measures that can be used to determine the performance of a project

Three Management Measures are:

1.Cost Performance Index (CPI)

2.Schedule Performance Index (SPI)

3.Earned Business Value (EBV)

* **Cost Performance Index (CPI):**Determines whether we are ahead or behind the cost factor.

ie;**Cost Performance Index (CPI) = (Baseline Cost per Story Point)/(Actual Cost per Story Point)**

If project goes according to plan **CPI and SPI would = 1** every Sprint. If **CPI>1**, then we are spending less than what is expected for each Story Point.If **CPI<1**, then we are spending more than what is expected for each Story Point.

* **Schedule Performance Index (SPI):**Determines whether we are ahead or behind the project schedule.

ie;**Schedule Performance Index (SPI) = (Actual Velocity/Baseline Velocity)**

If **SPI>1**, then we are finishing earlier than expected.If **SPI<1**, then we are finishing later.

* **Earned Business Value (EBV):**It gives a clear picture of the project’s progress and is a new metric in agile.It measures outcomes not outputs.Here outcome means the “end goal or vision” while output means “what we do and who we reach”.Stories does not have business value, but contributes to the feature that has business value.

**5.In Agile, the team always picks up business value user stories in every sprint. Do we still need to know earned value?**

Ans:

Yes. It is very important to know the earned values at the end of each sprint for the greater visibility and comtrol of the project activities. This allows for the proper evaluation of the amount of work done and the amount of work left to be done. In a sense, it allows the sprint team to improve the performace of the project .

Earned value helps to

* improve cost/schedule control
* identify risks
* manage scope variation
* predict cost at completion of projects
* analyse performance and improve efficiency
* predict financial results
* better employee planning