Assignment-6.1

Introduction to Agile & Scrum

#Agile - principles -

1. Customer Satisfaction : Deliver valuable software early and continuously.
2. Welcoming change - Embrace changing requirements, even late in development.
3. Frequent Delivery :- Deliver working software frequently
4. Collaboration :- Business people & developers must together daily
5. Motivated Individuals :- Build projects under skilled & motivated individuals.
6. Face to Face communication :- Use face to face conversation as the primary communication method.
7. Working Software :- primary measure of progress.
8. Technical Excellence :- Continuous attention to technical excellence and good design.
9. Simplicity :- Maximise the amount of work done.
10. Self-Organizing Team :- Best architectures, requirements, & design emerge from self-organizing teams
11. Reflection :- Regular intervals to reflect & tune behaviours.

Scrum Framework:-

Scrum Roles-

→ Product owner :-
- → Define the product backlog.
- → Priorities needs based on stakeholder & customer input.
- → ensures team delivers value.

→ Scrum Master:-
- → Facilitics scrum processes.
- → Removes impediments.
- → Coaches team to follow scrum practices.

→ Development team:-
- → Self-organizing group responsible for delivering increments
- → Typically 5-9 members.

Scrum Events:-

→ Sprint -
- → Time-boxed period (1-4 weeks) where a deliverable increment is created.
- → Regular duration throughout development.

→ Sprint planning -
- → Team plans the work to be performed during the sprint
- → Defines the sprint goal.

→ Daily Scrum :-
- → 15-minute time boxed event for team to synchronized activities
- → Focus on progress towards the sprint goal.

→ Scrum Artifacts :-

→ product Backlog –

→ ordered list of all work for the product.

→ Dynamic & evolve a new requirements emerge.

→ Sprint Backlog :-

→ Set of product backlog item selected for sprint.

→ Includes a plan for delivering the increment.

→ Increment :-

→ Sum of all the product backlog item completed during sprint.

→ must be "Done" & usable.

→ Definition of Done (DOD) :-

→ Shared understanding of what it mean for work to be completed.

→ Ensures transparency & quality.

Best Practices –

1. **Time boxing** - Strict time limits for events to increases focus & efficiency.
2. **Cross-functional teams** – ensures diverse skills within the team to handle all work.
3. **Continous Integration** - Frequently integrates & test changes to detect issues.
4. **Restrospective Actions** - Act on restrospective finding to continually improve.
5. **Stakeholder Engagement** – Regularly involve stakeholder for feedback & alignment.
6. **Automated Testing** :- Reduces manual testing effort & increases reliability.
7. **Agile Metrics** – Use metrics like velocity, cycle time & lead time to drive improvements.