SNS COLLEGE OF TECHNOLOGY

Coimbatore-35

An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SOFTWARE ENGINEERING

(Agile UX/UI)

UNIT 2 – AGILE DEVELOPMENT

Extreme Programming (Xp)

- Xp is most commonly used Agile process model
- Higher quality software
- Xp is a lightweight, efficient ,low risk ,flexible, predictable, scientific to develop the software
- Small to medium sized team that works under vague and rapidly changing environment

The five Xp values are :

- Communication
- Simplicity
- Courage
- Respect

Extreme Programming (Xp)

When Applicable :

- Dynamically changing software requirements
- Risks caused by fixed time projects using new technology
- Small, co-located extended development team
- The technology you are using allows for automated unit and functional tests

Extreme Programming (Xp)

Xp Programming Practices :

- The Planning Game
- Small Releases
- Metaphor
- Simple Design
- Testing
- Refactoring
- Pair Programming
- Collective Ownership
- Continuous Integration
- 40-hour week
- On-site Customer
- Coding Standard

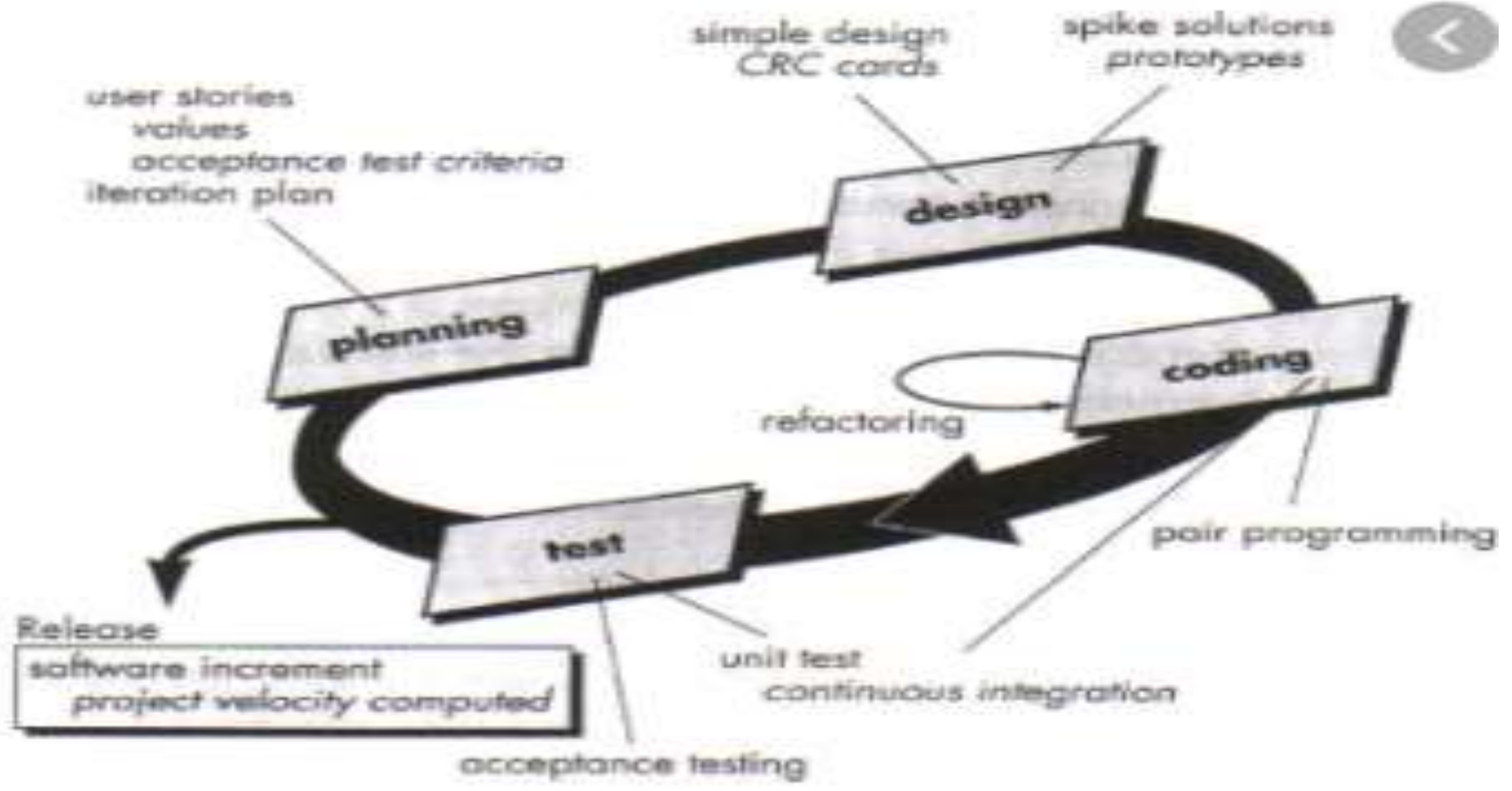

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Fig. Extreme Programming Process

The five Xp values

- **Communication :** The goal is to give all developers a shared view of system which matches the view held by the customer
- **Simplicity:** Xp encourage starting with the simplest solution ,extra functionality can be added in future if needed
- **Feedback :** From customer to team
- **Courage /bravery :** It enables developers to feel comfortable, with refactoring their code when necessary
- **Respect** : Include respect for others as well as self respect

Extreme Programming (Xp)

XP Processes:

Planning :

- Begins with creations of user stories
- Agile team access each story and assign coast
- Stories /requirements are grouped for deliverable increments
- A commitment is made on delivery date

Design :

- Encourage the use of CRC cards
- For difficult design problems , suggest the creation ‘spike solution’-a design prototype
- Encourage refactoring –an iterative refinement of internal program

Extreme Programming (Xp)

XP Processes:

Coding :

- Recommends the construction of test case before coding commence (test driven development)
- Encourage pair programming

Testing

- All unit test are executed daily
- Acceptance test are defined by the customer and executed to assess customer visibility functionalities

Extreme Programming (Xp)

Industrial XP:

- Readiness assessment
- Project community
- Project chartering
- Test-driven management
- Retrospectives
- Continuous learning

Extreme Programming (Xp)

Industrial XP:

Readiness assessment :

The assessment checks whether

- (1) an appropriate development environment exists to support IXP
- (2) the team will be populated by the proper set of stakeholders
- (3) the organization has a distinct quality program and supports continuous improvement
- (4) the organizational culture will support the new values of an agile team,
- (5) the broader project community will be populated appropriately

Extreme Programming (Xp)

Industrial XP:

Project community :

- Ensure right people used in the agile team to ensure success.
- The implication is that people on the team must be well-trained, adaptable and skilled, and have the proper temperament to contribute to a self-organizing team.

Extreme Programming (Xp)

Industrial XP:

Project chartering :

- Asses the project - whether the project will further the overall goals and objectives of the organization.

Extreme Programming (Xp)

Industrial XP:

Test-driven management :

- An IXP project requires measurable criteria for assessing the state of the project and the progress that has been made to date.

Extreme Programming (Xp)

Industrial XP:

Retrospective :

- An IXP team conducts a specialized technical review after a software increment is delivered, Called a retrospective.