Myles Egan, ESTIO - Day 2

1. Name 4 project constrains.

Feature, time, cost and quality

2. Give one example of how software quality can be compromised.

Failing to plan for failures. Such as the architecture needing to change but the time-line hasn't accounted for it. As well as fluctuating and ever-growing nature of the technologies used and the cultural need to stay relevant and state of the art.

3. Give an example of how schedule (time) may not be met.

Delays, technical difficulties, contractual disputes

4. Give an example of how software project cost may spiral.

The UK National Offender Management Information System project (called C-NOMIS) failed amid scathing attacks, accusations of mismanagement, and vast budget overruns. They had an approved lifetime cost of £234 million to 2020. By July 2007, £155 million had been spent on the project, it was two years behind schedule, and estimated lifetime project costs had risen to £690 million.

5. Give an example of how project scope may not be met.

The architecture may need to change, which will delay the predicted time originally accounted for, if this failure is not planned for.

6. Name 4 activities of Waterfall project.

Analysis, design, development, and testing

7. Name two common frameworks for understanding and implementing DevOps.

Jenkins and Bamboo

8. What are the 4 benefits of agile way of working?

Value: fast and frequent, Visibility: failing fast and adjustments in small measures, Responsiveness & Adaptability: addressing changes effectively, and Risk Reduction: shared responsibility.

9. What is the difference between Lead Time and Cycle Time?

Lead time includes when the task was created and the wait/queue involved in beginning projects where as Cycle time only refers to when the work is started and completed.

10. Why should you plan for failure and how?

If you plan for failure then you will reduce risk of wasting time, cost and quality. To plan for failure you can use Agile methodologies, especially focusing on 'visibility' as to fail fast and make adjustments in small measures, another would be to focus on 'responsiveness and adaptability' as to address changes effectively. This is utilised as a part of risk reduction; to share responsibility.

11. What does PDSA stand for?

Plan-Do-Study-Act

12. Name 5 wastes of Lean.

Over-production, waiting, transport, motion, and defects

13. Name three elements of Lean Thinking.

Optimise the Whole, Respect People, and Deliver fast

14. What are the Agile Manifesto Values?

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

15. Name 2 predominant agile methods.

Scrum and Kanban

16. Describe Scrum in a sentence.

Scrum is a light touch Lean / Agile framework that implements the Agile values and principles.

17. What is the relationship between Scrum and eXtreme Programming?

Extreme Programming **allow changes in their set timelines**. Scrum emphasizes self-organization. In Scrum framework, team determines the sequence in which the product will be developed. In Extreme Programming, team have to follow a strict priority order or pre-determined priority order.

The common ground between Scrum and Extreme Programming is that they adhere to most Agile development principles. For example, both methodologies support the development of software in iterations. Customer feedback is also an essential part of the software development process, while the delivery of high-quality software is a goal for the development teams.

18. Name Scrum Events

Sprint -> sprint planning -> daily scrum -> sprint demo -> sprint retrospective

19. Name Scrum Roles.

Product owner, scrum master and scrum team

20. Name 3 Scrum Artefacts.

- Product Backlog
- Sprint Backlog
- Burndown Chart

21. What does “Done” mean in Scrum.

“Done” is defined by an acceptance criteria that are common to every single user story

22. Name 3 types of product backlog items.

Product Feature set, Product Backlog, and Sprint Backlog

23. Name some of the typical information you may expect on a story card.

- Customer’s view of value
- All functional and non-functional requirements
- Mandatory requirements (Architectural, Security, Documentation, etc.)
- Changes throughout development lifecycle (including bugs and errors)
- User Acceptance

24. Briefly explain one method of delivering a Potentially Shippable Product Increment based on product features.

Identify the Epics / Steps / High-Level Features of the product:
- Feature A: Find a product
- Feature B: Select a product
- Feature C: Pay & ship a product

1. Identify the top level Caterforce's of product features. Then identify the epics relating to the feature. We’ll only capture the features and the epics that we’re currently aware of. At this time we don’t need too much detail.

2. Selecting the most valuable epics to deliver and identifying the dependent epics. This should give us a simple path or a slice of the product, also known as Potentially Shippable Product Increment.

3. Based on received feedback and other parameters we identify the next most valuable epic(s) and improve our product to include the epic(s).

4. Each slice of the product is driven by the evidence that could include user feedback, changes in the technology, environments, experience and may take one of more sprints or involve one or more teams to complete, but the concept is the same.

5. The most important benefit of agile is in the fact that we’re driven by data and evidence. Therefore we only repeat the process until the evidence tells us otherwise. Based on received feedback and other evidence some originally identified features may be abandoned and some may be added.

25. In Scrum is potentially shippable product immediately available to users / clients?
a. If not why?

It’s not because it needs to be continually tested to figure out the most valuable epic(s) - the most important benefit of agile is in the fact that we’re driven by data and evidence before it gets shipped.

26. Briefly describe the role of UCD / UX in relation with Scrum Backlog.

The most important benefit of agile is in the fact that we’re driven by data and evidence - therefore the product is sculpted for and by the users as it is driven by feedback and makes it inherently User Centric Design and User Experience. Therefore we only repeat the process until the evidence tells us otherwise. Based on received feedback and other evidence some originally identified features may be abandoned and some may be added.