



REVISION PAPER ANSWER

ICT 3162 - Rapid & Agile Application Development



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Revision 02 Answers

Q1

a)

Kanban is a framework. Kanban approach is an agile strategy for continuous improvement, task management flexibility, and improved workflow. There is many Kanban process.

Start With What You Do Now - Existing processes, jobs, responsibilities, and titles are valued and should be preserved, according to the technique. Seeing all the item very informative.

Limit the amount of work - Teams do not start and commit to all works at once.

Manage flow - When something is finished, the next highest thing from the backlog is pulled into play.

Explicit Process Policies - You can't improve something you don't understand. This is why your procedure should be well-defined, documented, and shared.

b)

A sprint backlog is a collection of tasks. Sprint backlog is use to create a sprint backlog during our sprint planning meeting.

c)

The columns 'In progress (IP)' and 'Done' appear in every process state. If a job passes code review, for example, it is moved to the 'Code Review (Done)' column. Teams may avoid multitasking and stay focused on the most important tasks by pulling work.

d)

Using the Kanban board, everyone can instantly see how tasks are moving through the process. Teams can instantly observe how long a job takes and who is working on what by making the process transparent in this way. It also makes it simple to spot any bottlenecks that are slowing down the process or preventing the team from operating at peak efficiency.

e)

There are many advantages to using the Kanban system :

- Flexibility.
- Focus on continuous delivery.
- Reduction of squandered time and effort.
- Increased productivity.
- Increased efficiency.
- Team members' ability to focus.

Q2

a)

Lean and Agile are popular approaches to building software. But some differences are there:

The goal of lean is to eliminate waste. Almost all of its concepts emphasize a minimalist approach to development.

Agile, on the other hand, relies greatly on cross-collaboration. The Agile technique emphasizes collaboration among business partners, developers, end users, and pretty much anybody else involved.

b)

In Lean management, waste is defined as everything that does not add to the customer's impression of value. Any operation that uses resources but provides no value to the end customer is considered waste in Lean. Any needless step in the production process that does not benefit the consumer and so is not worth paying for is considered waste. Wasteful actions can reduce profitability, raise consumer expenses, impair quality, and even reduce staff happiness.

c)

A pull process, in the context of workflow management, allows workers to pull their next job if they are ready to begin working on it. This may help you better prioritize initiatives and avoid overburdening personnel.

d)

- A decrease in cost - Lean management is all about maximizing profits.
- Improved customer interactions
- Utilization of “Push” and “Pull”
- Increased quality - decrease the number of defects and reworks in products
- An improvement culture - create a culture that values daily improvement.
- Increased employee morale

e)

Value – Value is customer specific product.

Value stream – All the steps and processes involved in taking a specific product and delivering the final product to the customer.

Flow – Steps flow

Pull – “Just in time” manufacturing or delivery. Customer can pull the product.

Perfection

Q3

a)

JAD is a business system requirements definition strategy. It is engaging the client and the end users to design and develop the system. JAD can be use wide range of projects.

- New system
- Enhancements to existing system
- System conversions
- Purchase of a system

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b)

- Involves willing users
- Involves many groups of users who's responsible for division boundaries
- First time project for the organization
- Considered crucial to the organization's future success

c)

Facilitator –

Facilitator is most important person. They responsible for planning, executing and managing the sessions. The facilitator should be able to:

- Focus on the process
- Be unbiased and neutral
- Lead groups and keep sessions on track
- Stop sideline conversations

Observer –

This individual keeps track of each phase of a JAD session, the demands of the end user, and the decisions made throughout the session.

Executive sponsor –

This person manages of the business area who full freedom to make critical decisions.

Stakeholders –

The entire process revolves around the stakeholders.

d)

Planning/Definition

Perform the following activities to complete the Planning stage:

- Appoint an executive sponsor.
- Establish the system's need.
- For the definition component, choose team members.
- Define the session's parameters.

Preparation

You must accomplish the following activities to finish the Preparation stage:

- Schedule design sessions.

- Conduct design session participants' orientation and training.
- Prepare the items, the room, and the computer program.
- Customize the agenda for the design session.
- Organize a launch meeting.

Sessions on Design

You must accomplish the following tasks in order to fulfill the Design Session component of JAD:

- Examine the scope, objectives, and definition paper for the project.
- Determine the needs for data, processes, and systems.
- Determine the system interfaces.
- Create a prototype.
- Document your judgments, issues, assumptions, and terms definitions.
- Assign someone to handle all problems.

Finalization

You must accomplish the following activities to complete the Finalization component:

- Finish the design documentation.
- Approve the design documentation.
- Present your idea to the executive sponsor.
- Showcase the prototype.
- Obtain the consent of the executive sponsor before proceeding.
- Examine the JAD procedure.

e)

The JAD session entails more than just getting everyone together for a day to talk about everything. In order to make these sessions as fruitful as possible, a set of formal approaches is frequently utilized. Among them are:

- Identifying the right people
- Using a facilitators
- Having someone take notes
- Devoting the time and effort required to establish an agreement.

Q4

a)

Extreme Programming (XP) is an agile software development approach that attempts to deliver better software while also improving the development team's quality of life. XP is the most complete agile framework in terms of suitable engineering methodologies for software development. The five XP values are communication, simplicity, feedback, boldness, and respect, which are outlined in further detail below.

Communication - At every level of the project, everyone on a team collaborates.

Simplicity - Developers aim to build simple code because it saves time and effort and adds greater value to a product.

Feedback - Team members produce software often, receive feedback, and modify the product in response to new requirements.

Respect - Everyone working on a project contributes to achieving a common objective.

Courage - Programmers are constantly ready to adapt to changes and critically evaluate their own results without making excuses.

b)

Sit together - Sit in the same room without any communication obstacles, such as cubicle partitions. One of the five XP values is communication, and most people feel that the ideal method of communication is face-to-face discussion.

Work that is energized - When it comes to software development, you are most productive when you are focused and free of distractions. Taking steps to ensure that you are physically and mentally capable of focused is part of energized work. It also entails staying healthy and treating your coworkers with respect in order to maintain their health.

Pair programming - It means you'll get regular code reviews and faster responses to annoying issues. Because there are fewer code changes, teams have discovered that it increases quality and does not take twice as long.

In XP, the team creates a lot of functioning code over time, which raises the complexity and adds to technical debt.

- Check for duplicate code or routines.
- Double-check that all variables in scope are specified and utilized.
- No lengthy methods or functions

c)

Traditional organizational systems are resistant to change, slow to adjust, and cause constant irritation.

Agile companies, on the other hand, are built on short learning and decision-making cycles. They build a sense of shared purpose by empowering teams to make better decisions via openness and visibility. They try for the correct mix of speed and flexibility, as well as stability and efficiency, throughout the process.

d)

Scrum is the most frequently used Agile methodology, which employs iterative processes to tackle complex software and product development. Scrum techniques enable businesses to easily accept changing needs and build a product that satisfies their objectives.

Faux scrum approach:

A false scrum method combines scrum with waterfall processes, meetings, and paperwork. Agile double work leads to project team fatigue. You're not practicing Scrum or following agile principles if you're doing twice as much work.

Agile transformation takes time:

Any type of change reveals underlying organizational issues, such as a lack of communication, responsibility, training, and budgeting. A full corporate cultural shift, as well as leadership team acceptance, is essential for an effective Agile transition.

Insufficient training:

Training the Scrum team allows them to learn faster and more effectively, reducing the number of errors they make. The absence of investment in team training implies a general lack of organizational commitment to scrum.