

Note the suggested answers are for the purposes to support students' study only

1. Explain why the rapid delivery and deployment of new systems is often more important to businesses than the detailed functionality of these systems.

Answer

A conventional waterfall or specification-based process is usually prolonged and the final software is delivered to the customer long after it was originally specified. In a fast-moving business environment, this can cause real problems. By the time the software is available for use, the original requirements may have changed so radically that the software is effectively useless. Therefore, for business systems in particular, development processes that focus on rapid software development and delivery are essential

2. Explain how the principles underlying agile methods lead to the accelerated development and deployment of software

Answer

The principles underlying agile development are:

- **Individual and interactions over processes and tools.** By taking advantages of individual skills and ability and by ensuring that the development team know what each other are doing, the overheads of formal communication and process assurance are avoided. This means that the team can focus on the development of working software.
- **Working software over comprehensive documentation.** This contributes to accelerated development because time is not spent developing, checking and managing documentation. Rather, the programmer's time is focused on the development and testing of code.
- **Customer collaboration over contract negotiation.** Rather than spending time developing, analyzing and negotiating requirements to be included in a system contract, agile developers argue that it is more effective to get feedback from customer's directly during the development about what is required. This allows useful functionality to be developed and delivered earlier than would be possible if contracts were required.
- **Responding to change over following a plan.** Agile developers argue (rightly) that being responsive to change is more effective than following a plan-based process because change is inevitable whatever process is used. There is significant overhead in changing plans to accommodate change and the inflexibility of a plan means that work may be done that is later discarded.

3. When would you recommend against the use of an agile method for developing a software system?

Answer

Agile methods should probably not be used when the software is being developed by teams who are not co-located. If any of the individual teams use agile methods, it is very difficult to coordinate their work with other teams. Furthermore, the informal communication which is an essential part of agile methods is practically impossible to maintain unless they are being supported by collaboration tools such as online meeting.

Agile methods should probably also be avoided for critical systems where the consequences of a specification error are serious. In those circumstances, a system specification that is available before development starts makes a detailed specification analysis possible.

Other scenario when Agile methods should be avoided are: -

- a. Project with well-defined requirement
- b. Project that required formal process and/or formal documentation

4. Describe the job responsibility of a Product Owner in a Scrum team.

Answer

Product Owner is responsible for a project's outcome, in a Scrum team. He/She manages the product backlogs, trying to maximize the product's value.

In the agile software development framework, Scrum, the team self organizes and communicate and practice the agile principles.

The Product Owner communicates and interact with the stakeholders, end users, and work together with the scrum teams on the functions of the products and product backlogs, so as to ensure the development is on track and satisfying the stakeholders and end users.

5. Describe the job responsibility of a Scrum Master in a Scrum team.

Answer

A Scrum Master is the leader of the agile development team. He/she communicates with the team on the progress, facilitates collaboration among team members, and evaluate the work done by the team.

A Scrum Master guides, motivate the team members, with a deep understanding to the project and development. In details, he/she coaches the members, meets regularly with the team, and provide feedback on their work on deliverables and work efficiency

6. What is the main role of a developer during product backlog grooming?

Answer

In agile development team, backlog grooming refines backlogs or story time. This ensures that in the next sprints worth of user stories in the backlog prepared for sprint planning

During backlog grooming, a developer as a participant of backlog grooming meetings, involves in reviewing the backlog items, discussing the items to be developed during the next sprint, offering ideas on the team capacity and responsibilities, and how to assure quality.

7. Write a description for a PBI with user stories, "Change the UI Language".

Answer :

User story: change UI language

Description : as a user, I want to be able to change the language used on the UI, so that I can understand the application better

Acceptance Criteria: given ... when .. then...

Given that I am in the Setting page, **when** I click on the 'change language' button, **then** a change language dialog box with a list of available language options will be displayed

AND **when** I select my preferred language by click on the select box next to the language and click 'confirm' button, **then** the dialog box closed, route me to the homepage, and then application displays in the language I have chosen and confirmed

8. Write a description for a PBI with user stories, "Remove Item from Shopping Cart".

Answer :

User story: Remove Item from Shopping Cart

Description : as a user, I want to be able to remove unwanted items from my shopping cart.

Acceptance Criteria: given ... when .. then...

Given that I am on my shopping cart page, **when** I click its 'manage my shopping cart' icon, **then** the list of all items in my cart will display. One of icons is '-' icon, labelling 'Delete' next to each item.

AND **when** I click on the '-' icon next to the item which I don't want it anymore, a dialog box appears to display 'confirm'. After I click the 'confirm' option, this item and the number of this item will disappear from my list. The shopping cart updates with the unwanted item removed.