

Systems Development and Economics

EXAMEN JANUARY 2020

1/ Draw a class diagram of a case

2/ Draw a sequence diagram and a class diagram (show interdependence) based on a case

Some more info on the case: was about a help desk, client calls, if an operator answers within 10 seconds they have a regular conversation to solve a problem. If the operator doesn't answer within 10 seconds an automated system will record all the questions of the client. Once an operator is available he will review the questions and call the client to provide answers.

3/ Illustrate the aspect of a software development process through RUP.

4/ For requirements gathering you can use a graphical notation or structured natural language. Give an example of both techniques. Also explain the benefits and drawbacks of both.

5/ Explain use case point technique and its use. And is it the same as use case development?

EXAMEN JANUARY 2021

1/ Draw a class diagram of a case

2/ Draw a sequence diagram and a class diagram (show interdependence) based on a case

3/ What is the difference between the waterfall method and agile development? And what is the difference between agile development and DevOps?

4/ For requirements gathering you can use a graphical notation or structured natural language. Give an example of both techniques. Also explain the benefits and drawbacks of both.

5/ Explain use case point technique and its use. And is it the same as a use case development?

EXAM JANUARY 2023

- - he asked to draw a class diagram of a translator agency that has translators, client which is a company, invoices
- - he asked the call center question again!! draw a sequence diagram + a class diagram

Explain use case point tech and is it the same as use case development?

The case point technique is used to calculate the efforts and costs of a project, it starts with calculating the unadjusted use case weight (UUCW) which can be done by counting the number of transactions. If >7 transactions a score of 15 will be assigned, if between 4 and 7 a score of 10, if between 1 and 3 a score of 5. The score is multiplied by the number of use cases. After, the unadjusted actor weight is calculated, if human actor 3 (complex is assigned), if third party system involved and dialoging is more formalized we say 1 (simple), if more difficult 2 (average). The weight is multiplied by the number of actors. $UUCP = UUCW + UAW$ can be then corrected for technical complexity using predetermined factors, as well as adjustment for environment. This leaves us with UCP : $UUCP \times TCF \times EF$.

It is completely different from use case developments as use case development is a method in which we design a system and function of a use case . A use case is defined as an intention of the user with respect to the system. We develop in a way that requirements of the user or fully respected.

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Difference structured natural language and graphical notation

Structured natural language is expressing a requirement in an understandable way using a template like for instance "I ..ROLE.. want..., so that..WHY". The advantage of this is that it is easy for the user to express using natural language, the downside is that it misses details, we therefore use graphical notations. Graphical notations are graphical models accompanied by text annotations that give more details. However, they can be time-consuming to create and may not capture all the necessary information.

Examples:

- User stories are in agile methodes the way to represent user requirements. "I as an accountant want to make invoices".
- In fact every diagram in UML is a graphical notation.