

Week 2 Cohort Exercises

Question

What are the advantages and disadvantages of software modelling? What other types of modelling are you aware of and do the advantages and disadvantages apply to this type of modelling that you had identified?

Case Study

Global Knowledge Pte Ltd has a resource centre to loan the software items to its internal staff within the company. A web application is to be developed with the functions described below.

The system allows staff to submit loan requests by specifying the purpose and the duration of the software items to borrow. The system will route the requests to the resource manager for approval and the staff will be notified by email on the outcome of the request. The system will allow the staff to check-out the items with a loan transaction created.

The software must be returned by the due date. The return date will be recorded, and the loan record status will be updated. If the loan is overdue, a reminder email will be sent to the relevant staff.

The system also allows the Resource Manager to generate a summary report to consolidate all the loan transactions at any point in time.

As far as the intended performance is concerned, the web application should support online loan applications for 50 concurrently users with processing time not more than 10 seconds in each request.

Tasks:

1. As a team, derive a domain class diagram for the case study scenario.
2. For each of the use cases and use case descriptions you and your team had completed previously, identify all the analysis objects that will participate in each of the use cases sequence diagrams. Explain why you had identified these analysis objects for the sequence diagram.