


Dertisova Altynay 2018380120

Credit Guarantee

I am familiar with the principles of examination and relevant provisions of the regulations of the disciplines; I will surely conform to the rules of the examination, and be an honest student.

Sign here: 

class: SE

Student number: 2018380120 Name: Dertisova Altynay

1 B		Answer sheet									
2 D		1	2	3	4	5	6	7	8	9	10
3 C		B	D	C	B	C	B	A	D	B	C
4 B											
5 C											
6 B											
7 A											
8 D											
9 B											
10 C											

Part II

① Scrum requires that the team and PO are able to commit to at least a week's worth of work, while in Kanban the incoming queue can be changed at will.

Scrum drives story completion with what the team committed to complete in a fixed length iteration. Kanban is focused on the flow of a stories (moved from starting point to the end point)

②

1 SF₁: 180, 675, 315, 212, 278, 303, 431

$$MTTFS_1 = \frac{2594}{7} = 370.5$$

$$\text{Reliability} = \frac{370.5}{(1 + 370.5)} = 0.997$$

2 SF₂: 477, 1048, 685, 396

$$MTTFS_2 = \frac{2606}{4} = 651.5$$

$$\text{Reliability} = \frac{651.5}{(1 + 651.5)} = 0.998$$

3 SF₃: 894, 1422

$$MTTFS_3 = \frac{2316}{2} = 1158$$

$$\text{Reliability} = \frac{1158}{(1 + 1158)} = 0.999$$

4 SF₄: 160, 275, 310, 966

$$MTTFS_4 = \frac{1711}{4} = 427.75$$

$$\text{Reliability SF}_4 = \frac{427.75}{(1 + 427.75)} = 0.997$$

④

Verification - are we building Product right?

Validation - are we building Product right?

Verification is the practice of verifying documents, design, code and Program. It helps to determine whether a software is of high quality, but it will not ensure that the system is useful.

Validation is the process of evaluating the final Product to check whether the software meets the customer expectations and requirements.

③ Coupling is the measure of degree of interdependence between the modules. Low coupling mean a good software.

Cohesion is the measure of the degree to which the elements of the module are functionally related.

Coupling increase between 2 classes A and B is:

- A has an attribute that refers to B

- A calls on services on object B

- A has a method that reference B

- A is a subclass of B

High cohesion is when we have a class that does a well defined job.

Low cohesion is when a class does a lot of job that don't have much in common.

④ Size metrics are good candidates for developing cost of effort estimates for implementation, review, testing, or maintenance activities. Such estimator then can be used as input for project planning purposes.

3

Efficiency. → not wasteful of system properties. Includes responsiveness, processing time, resource utilization.

8

1) Candidate classes:

Book, Journal, Library member, Copy of book, Member of staff, Book Borrower, short-term loan, system, item

3)

It begins by book Borrower actor sending a message to the library member. The message will specify the service required. The system has to check that it is permitted for the library member to borrow the book.

Also it is necessary to update the system information about how many copies of the book are in the library.

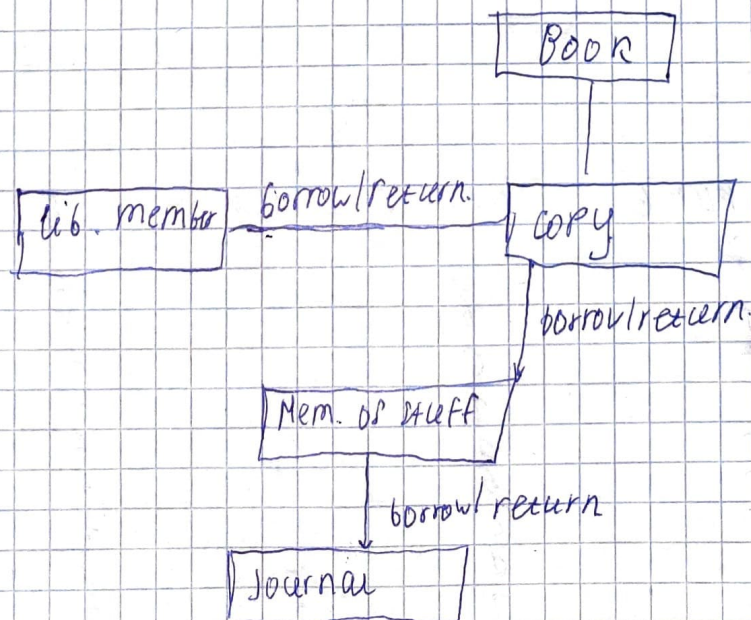
2). A copy is a copy of book

A library member borrows/returns a copy

A member of staff borrow/return a copy.

A member of staff borrows/returns a Journal

4)



⑦ Golden rules:

- 1 Place the user in control
- 2 Reduce the user's memory load
- 3 Make the interface concise.

1) Place the user in control: allow user interaction to be interruptable and undoable.

2) Reduce the user's memory load: reduce demand on short-term memory.

3) Make the interface concise: allow the user to put the current task into meaningful context.

⑥

Input A: 1, 2, 3

Input B: T, F

Input C: a, b, c

1)	Input a	Input b	Input c	Input a	b	c
	1	T	a	1	F	a
	1	T	b	1	F	b
	1	F	c	1	T	c
	1	T	d	1	T	d
	2	T	a	2	F	a
	2	T	b	2	T	b
	2	T	c	2	F	c
	2	T	d	2	T	d
	3	T	a	3	F	a
	3	T	b	3	T	b
	3	T	c	3	F	c
	3	T	d	3	T	d