

5.(b)

Uncertainty:

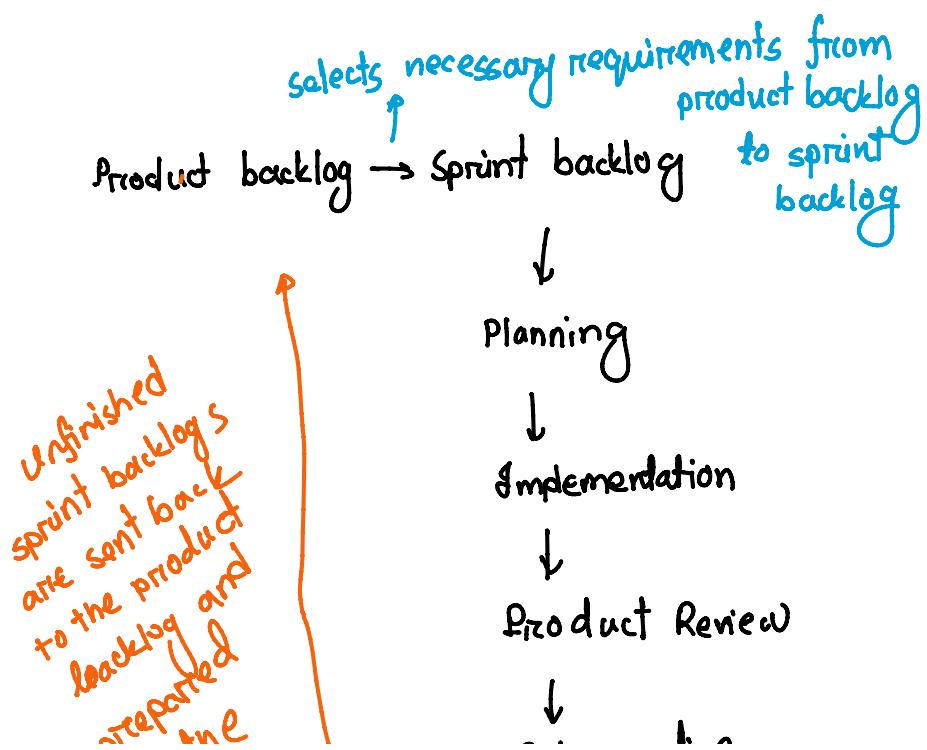
a potential problem which may or may not occur in future.

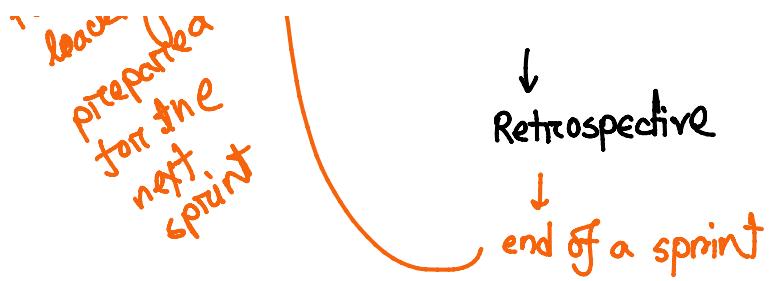
loss:

If that problem happens, the unwanted consequences resulting from it are losses.

In a project, project risk threatens the project plan (uncertainty). If it happens, it brings out unwanted consequences like delay in project scheduling and increment of project cost.

5.(b)



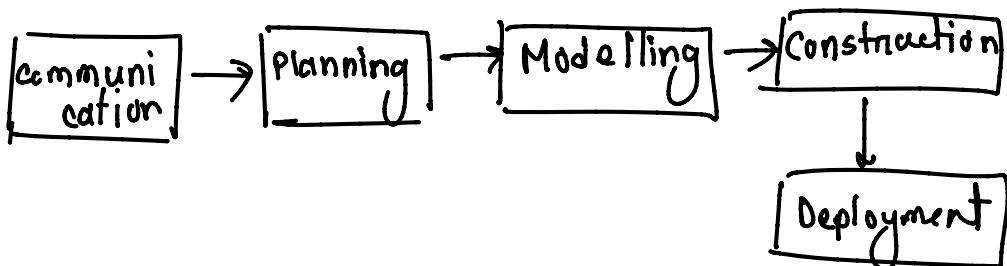


5①

- ① easier to maintain
- ② easier for code review
- ③ improves efficiency most of the times
- ④ mostly maintains a scalable structure ,
- ⑤ optimizable via code refactoring -

6①

waterfall process model:



Shortcomings:

- 1) detailed planning providing at the early stage is tough.
- 2) High risk of testing and evaluation at the last stage .

2) High risk of testing and evaluation at the last stage.

In incremental and evolutionary process model, development of a software project is incremented over several stages (In evolutionary process model, client requirements vary over time and accordingly the software product is finished. On the other hand, ^{in incremental} models, client requirements are fixed from the beginning and the final product is done after few completion processes.). In both of these models, the shortcomings of waterfall process models are resolved.

6. (b)

PV after one month = \$145

EV = \$140

actual cost, AC = \$130

SPI = $\frac{\$140}{\$145} = 0.965 \rightarrow$ behind the schedule

CPI = $\frac{\$140}{\$130} = 1.077$

EAC = $\frac{\$250}{1.077} = \232.12

6-(c)

Code Smell:

code smells are those portions of a code which need to be refactored for proper maintenance and structured code organization.

Examples of code smell:

(i) Duplicated code

(ii) Shotgun surgery: a change in needs many changes in other data classes.

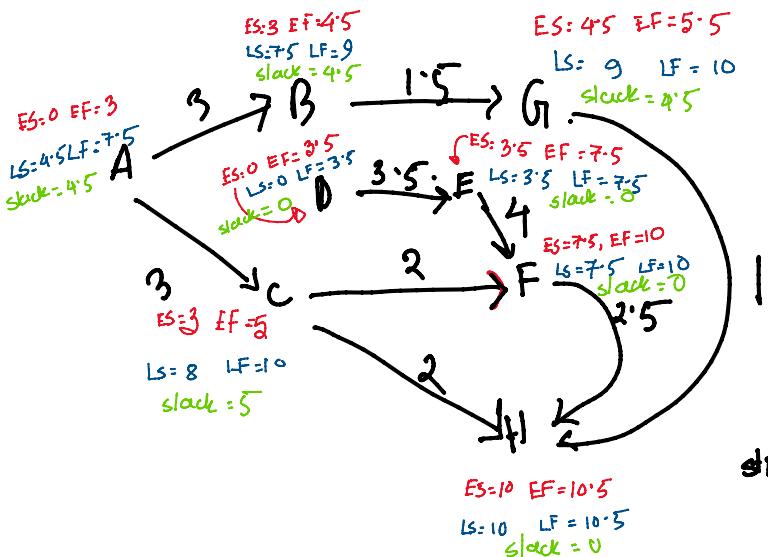
(iii) Refused Bequest:

A subclass ignoring most of the functionality of parent class

7-(a)

Main theme: traditional methods are slow. Agile processes bring pace and more client involvement.

7-(b)



strict deadline = 10.5 days
critical path = D → E → F → H

7. (c)

It would take time to make them understand
the workflow and aware them of updates
so far.

Main theme:

8. (a)

Driver curries the code, navigator observes the
workflow and provide suggestions.

8. (b)

canban board is maintained to keep track of the
canban cards each subtask of a task. ∵ divided into the

canban cards. Each subtask of a task is divided into the canban cards. Pulling the cards from left to right means completing a subtask. There is no strict scheduling. However, reducing the canban cards signify lowering work loads.

s.(b)

people: the individuals participating in software development in some way.

process: the set of software engineering activities to get the job done.