



CSE471-System Analysis and Design

Assignment-01

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Answer to the Q. No 1

Comparison between Agile and DevOps.

- i) DevOps is a practice of bringing development and operations team together whereas Agile focuses on cross-functional group correspondence and conveying consistent iterative delivers.
- ii) DevOps centers around the start to finish programming measures that accepts steady turn of events and testing, on the other hand, Agile focuses on accepting mid project changes.
- iii) In DevOps, team members have different range of abilities. In Agile, groups have comparable ranges of abilities.
- iv) DevOps expect to present constant conveyance day by day where Agile supporters make gradual arrangements after each run.
- v) DevOps tools:- Active Collab, JIRA, Git, Pivotal Tracker etc.
Agile tools:- Docker, Nagios, Jfrog Artifactory, Kubernetes etc.

Answer to the Q. No 2

	Year 0	Year 1	Year 2	Year 3
Total Benefit	0	43615	58363	74169
Total Cost	84468	10819	12316	12776
Net Benefit = (Total Benefit - Total Cost)	{84468}	32796	46047	61393
Cumulative Cash flow	{84468}	{51672}	{5625}	55768

We know, $BEP = \frac{\text{Number of years of negative cash flow} + \frac{\text{That year's net cash flow} - \text{That year's cumulative cash flow}}{\text{That year's cash flow}}}{1}$

Here, Number of years of negative cash flow = 2

That year's net cash flow = 61393

That year's cumulative cash flow = 55768

$$\therefore BEP = 2 + \frac{61393 - 55768}{61393}$$

$$= 2 + 0.0916$$

$$\approx 2.09 \text{ years}$$

(Ans)

Answer to the Q.No 3

Functional requirements:

- Application will let user login using their unique username and password.
- Application will track of daily new foods which is stored in the fridge.
- Application will let user to update the fridge database.
- Application will detect and track any order.
- Application will detect rotten foods.
- Application will give notification to user of food more than a week.

Non Functional requirements:

- Application will show inner temperature to the user.
- Application will show load shedding duration.
- Application will show compression values.
- Application will give user to access fridge database.
- Application will be responsive in all user interface.
- Application will be update in every ten minutes.
- Application will work only for Walton Fridge.

Answer to the Q. No 4

Functional requirements:

- Application will enable the students login with their ID and pin.
- Application will have a two factor authentication.
- Application will have a search options for their lost items.
- Application will track if any lost items have been reached to respective owner.
- Application will ask the students to contact with 'lost and found' unit when they lost or found any item.
- Student should be able to enter description of lost item.

Non-Functional requirements:

- Application will be responsive in all user interface.
- Students can see lost item name in application interface.
- Application will have better performance, security testing, usability.
- Student can update or delete application.
- Application will have contact information of "lost and found" unit.