

1.

Agile	DevOps
<p>i) It is an iterative approach which focuses on collaboration, customer feedback and fast but small releases.</p> <p>ii) It focuses on constant changes.</p> <p>iii) Agile uses tactical frameworks like sprint, scrum.</p> <p>iv) Team size is relatively smaller</p> <p>v) It addresses the gap between the customer need and development and teams</p> <p>vi) It support rapid change, and a robust application structure.</p>	<p>i) It is a practice of bringing development and operation teams together</p> <p>ii) It focuses on constant testing and delivery</p> <p>iii) DevOps just divid sand spreads the skill set between the development and operation teams</p> <p>iv) Team size is relatively larger</p> <p>v) It addresses the gap between development and testing</p> <p>vi) The team must make sure the changes which are made to the architecture never develop a risk in entire project</p>

2.

	Year 0	Year 1	Year 2	Year 3
T. Benefit	0	43615	58363	74169
T. Cost	84468	10619	12316	12776
Net Benefit (benefit-cost)	84468	32796	46047	61393
Cumulative net cash flow	84468	51672	5625	55768

$$BEP = \frac{\text{Num of years of neg. cash flow} + \frac{\text{That year's net cash flow} - \text{That year's cumulative cash flow}}{\text{That year's net cash flow}}}{}$$

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

$$= 2.09162 \text{ Years}$$

### 3. A food freshness checking app for refrigerators:

#### functional requirement:

- The app will provide a graphical user interface for checking freshness of foods for their selected refrigerators.
- Users can connect their fridge to home wifi network.
- Users can pair or unpair a fridge using a specific passcode of the fridge. For pairing, bluetooth or connection to same wifi network is mandatory.
- Users can access the app locally via bluetooth or wifi and from anywhere via internet.
- Users can get readings about the food's freshness in percentage and an expiration date till the food will be fresh.
- Users can also read and control fridge's temperature for increasing food's expiration date. It can also be put on auto mode for this purpose.

#### Non-functional requirement:

- The app should be run on PCs, Tablets, Smartphones, etc.
- The app will also have a dedicated website for online access.
- The user should be able to load the app within few milliseconds.
- The fridges' and the food's data should be protected by the app.
- The foods should gain more longevity for the automatic temperature control.

