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Section: 5

Assignment 1

Answer to Question 1:

Devops is the practice of the software development team and the IT operation team's collaboration in making a project. There are many methods for developing a large scale based project and among them Devops is just a part of any software development method.

Devops can improve the current relation between the development and operation team because it has faster release cycles, improved quality when delivering any product because of the communication and it also has great efficiency because devops has automation and tooling to reduce manual work.

Answer to Question 2:

	Year 0	Year 1	Year 2	Year 3	Total Across All Years
Total Benefits	5000	35,000	45,000	50,000	135,000
Total Costs	75,000	15,049	12,000	20,049	122,049
Net Benefit	(70,000)	19,951	33,000	29,951	
Cumulative Cash Flow	(70,000)	(50,049)	(17,049)	12,902	

$ROI = (135000 - 122049) / 122049 = 0.1061131185 = \mathbf{10.611\%}$

Breaking Even Point = $3 + \{(29951 - 12902) / 12902\} = \mathbf{3.569 \text{ years}}$

Answer to Question 3:

Functional and non functional of a voip application:

Functional:

1. Ability of make or receive calls over the internet
2. Users will be able to share their screens with other participants
3. Call video and audio can be recorded in a conference.
4. Users can send a message to everyone on that call

Non-Functional:

1. The app will provide a secure connection which will protect user data from unauthorized access
2. The app will be compatible on other platforms such as windows, android, apple
3. The app's feature will be self explanatory on which feature will do what
4. There will be minimal downtime over the call and the call quality will be stable over the time.

Answer to Question 4:

Functional and non functional of a video streaming application:

Functional:

1. The app will have the ability to upload, manage and stream video content
2. Users and streamers will be able to create profiles and manage subscriptions.
3. Users will be able to search videos, have recommendations and discover new playlists.
4. Videos on that app will have many features such as pause, rewind, loop, fastforward, video control and also the ability to download videos for later.

Non-Functional:

1. The app's content will be secured from any type of unauthorized access and prevent content piracy.
2. The app's will be supported on different platforms such as android and ios and mostly windows pc.
3. The app will provide fast and seamless streaming with minimal loading and buffer.
4. The app will be able to take on a large number of users without compromising streaming quality or performance.