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Aim : Introduction to DevOps

Theory :

- Evolution of Software Development over years.

i) Waterfall Methodology

The evolution of Software Development life cycle starts in the mid twentieth century. The software was developed by code & fix technique which included two steps:-

① write some code
② Fix the problems of this code

However in 1956, the experience recognizes the problems with more large software development & then a model stagewise was originated.

Royee (1970) proposed the waterfall Methodology in order to avoid the difficult nature of "code & fix" approach He proposed the construction of a prototype, & involvement of the users in several phase.

In various researches the waterfall model is classified as a traditional methodology. The central concept of waterfall model is classified integrated verification & validation of the result by the customer in order to complete a certain phase.

The Waterfall methodology are mainly quality management & documentation. The Waterfall methodology describes a sequential proceeding strategy. also covering all phases from requirement to operation while not explicity covering maintances & disassembly.

2) Agile methodology :-

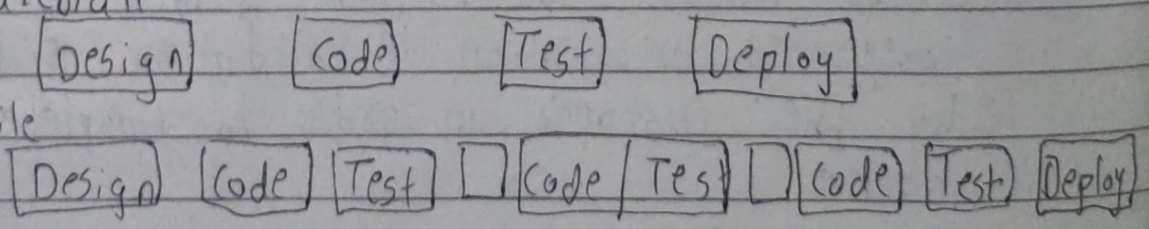
Agile methodology are a new host of methodologies that claim to overcome the limitations of traditional plan driven SDMs.

Agile means a practice that promotes continous iteration of development & testing throughout the software development lifecycle of the project.

The manifesto states that agile development should Focus on Four core values.

(i) Individuals & interactions over processes & tools
(ii) Working software over comprehensive documentation
(iii) Customer collaboration over contract negotiation
(iv) Responding to change over following a plan.

most studies reported that agile development pratice are easy to adopt & work well.



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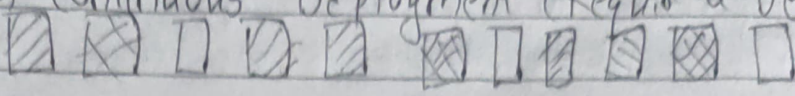
Agile With Continuous Deployment Require a Devops

Design 

Agile methodology is one of the simplest & effective processes to turn a vision for a business need into software solutions. Agile is a term used to describe software development approaches that employ continual planning, learning, improvement, team collaboration, evolutionary development & early delivery.
It encourage flexible responses to change.

- What is DevOps?

① Devops is a set of practice that combines software development (Dev) & information-technology operations (ops) which aims to shorten the system development life cycle & provide continuous delivery with high software quality.

② This allows a single team to handle the entire application lifestyle, from development to testing, deployment & operations.

③ Devops helps you to reduce the disconnection between software developers quality assurance (QA) engineers & system administrator.

④ Devops can also be defined as a sequence of development & IT operations with better communication & collaboration Devops helps to increase organisation.

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Speeds to deliver applications & services

- Why devops ?
we need to understand why we need the Devops over the other methods.

① The operations & development team worked incomplete isolations.
② After the design build the testing & deployment are performed respectively. That's why they consumed more time than actual build cycles.
③ Without the use of Devops, the team members are spending a large amount of time on designing, testing & deploying instead of building the project.
④ Manual code deployment leads to human errors in production.

- Why DevOps is Important ?

① Devops is important because it's a Software development & operations approach that enables faster development of new products & easier maintainances of existance development.
② Devops is no more than a set of processes that co-ordinate to unity development team & processes to complement Software development.
③ The main reason behind Devops popularity is that it allows enterprises to execute & improve products at a faster place than traditional software development methods.

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- Benefits of Devops :-

Technical Benefits :-

(i) Continuous software delivery
(ii) less complexity to manage.
(iii) Faster resolution of problems.

Cultural Benefits :-

(i) Happier & more productive teams.
(ii) Higher employee engagement
(iii) Greater professional development opportunies.

Business Benefits :-

(i) Faster delivery of features
(ii) More stable operating environment
(iii) Improved communication & collaboration
(iv) More time to innovate.

Conclusion :- We can conclude that we have completed studying Introduction to Devops.