Assignment

What is Git?
Git is an open-source distributed version control system. It is designed to handle minor to major projects with high speed and efficiency. It is developed to coordinate the work among the developers. The version control allows us to track and work together with our team members at the same workspace.Git is the foundation of many services like GitHub and GitLab, but we can use Git without using any other Git services. Git can be used privately and publicly.

What is GitHub?
GitHub is a Git repository hosting service. GitHub also facilitates many of its features, such as access control and collaboration. It provides a Web-based graphical interface.

GitHub is an American company. It hosts source code of your project in the form of different programming languages and keeps track of the various changes made by programmers.It offers both distributed version control and source code management (SCM) functionality of Git. It also facilitates some collaboration features such as bug tracking, feature requests, task management for every project.

Difference between Git and GitHub?
Git and GitHub are related but different tools. Git is a distributed version control system used to track changes in source code during software development. It allows multiple developers to work on the same codebase simultaneously and merge their changes. GitHub, on the other hand, is a web-based platform that provides hosting for Git repositories and additional collaboration features such as issue tracking, pull requests, and project management tools. In summary, Git is the version control system, while GitHub is a platform built around Git that provides additional features for collaboration and project management.

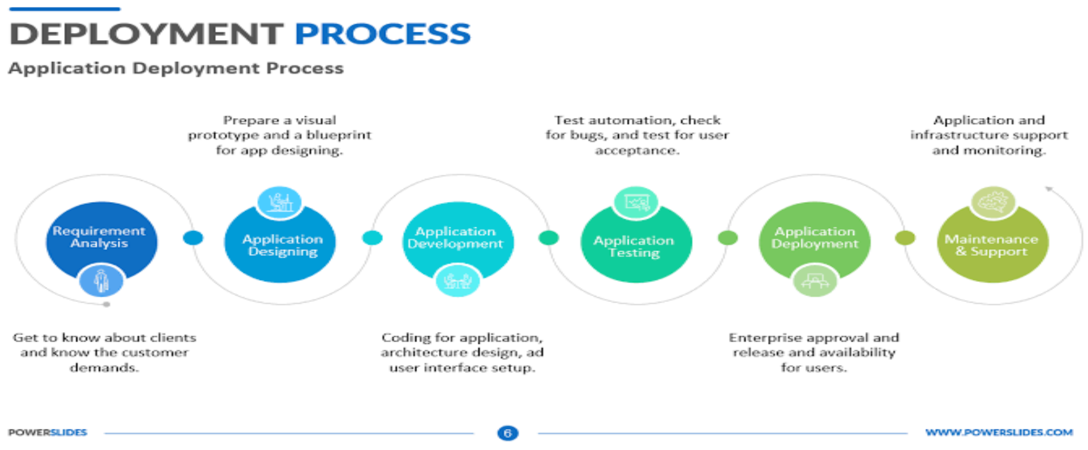
Difference between GitHub and Google Drive?
GitHub, Dropbox, and Google Docs/Drive are all popular cloud-based platforms, but they serve different purposes.

GitHub is primarily used for version control and collaboration on software development projects. It allows developers to store, manage, and track changes to their code, making it easier to work on projects with multiple contributors. GitHub also provides tools for issue tracking, code review, and project management.

Dropbox and Google Docs/Drive, on the other hand, are more focused on file storage and document collaboration. Dropbox allows users to store and share files, while Google Docs/Drive provides a suite of productivity tools for creating and collaborating on documents, spreadsheets, and presentations.

In summary, GitHub is tailored for software development and version control, while Dropbox and Google Docs/Drive are geared towards file storage and document collaboration across various types of projects.

What is Deployment?



DEPLOYMENT PROCESS

Application Deployment Process

Get to know about clients and know the customer demands.

Prepare a visual prototype and a blueprint for app designing.

Coding for application, architecture design, ad user interface setup.

Test automation, check for bugs, and test for user acceptance.

Enterprise approval and release and availability for users.

Application and infrastructure support and monitoring.

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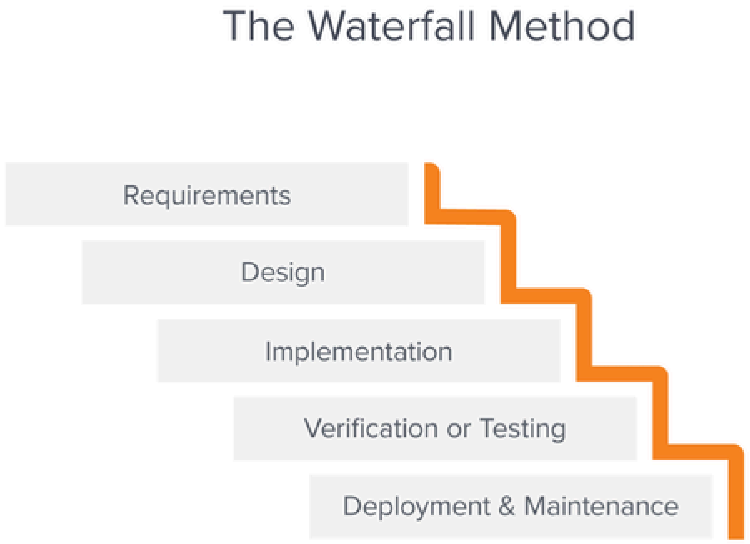
Deployment is generally releasing your work in front of a real audience for whom you have prepared the product. Like for example after building a car you test all the functionality of the car and then sell to customers after it passes all tests. The selling is deployment of the car in the real time scenario.

What is the waterfall methodology?

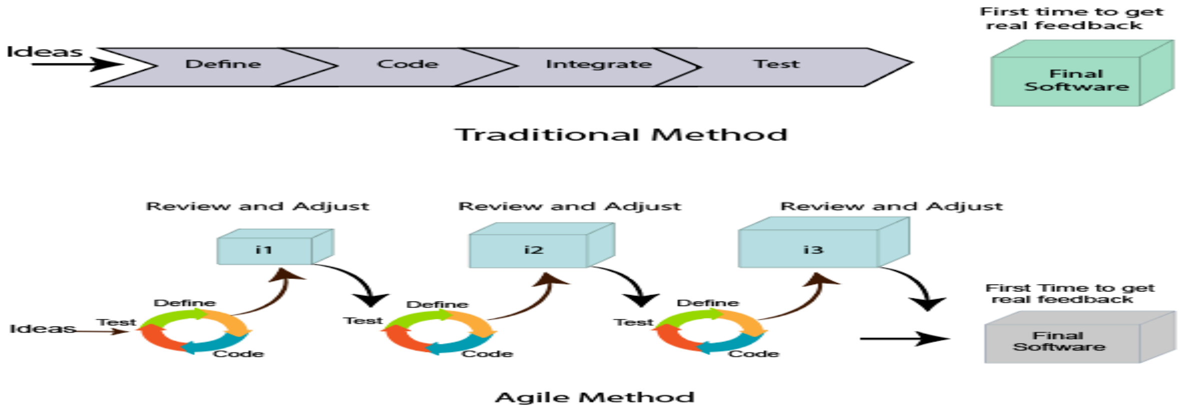
Waterfall methodology is a widely used project management method with a linear approach. In Waterfall, each stage of the workflow needs to be completed before moving on to the next step. While there are various types of project management methodologies, Waterfall is well suited for projects where the objectives are clearly outlined from the beginning. This article covers how Waterfall works, what projects the methodology is best suited for and how it compares with Agile, another project management method.



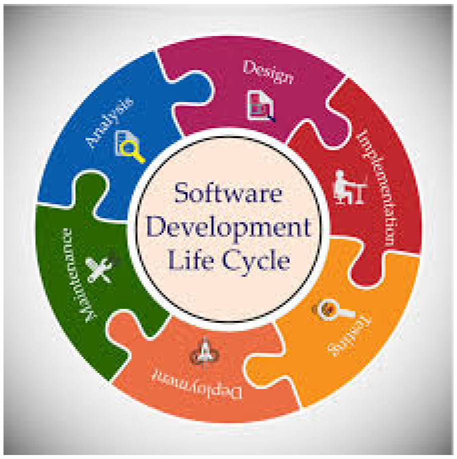
What is Agile methodology?

An agile methodology is an iterative approach to software development. Each iteration of agile methodology takes a short time interval of 1 to 4 weeks. The agile development process is aligned to deliver the changing business requirement. It distributes the software with faster and fewer changes.

The single-phase software development takes 6 to 18 months. In single-phase development, all the requirement gathering and risks management factors are predicted initially.The agile software development process frequently takes the feedback of workable product. The workable product is delivered within 1 to 4 weeks of iteration.



What is SDLC?



SDLC is a process followed for a software project, within a software organization. It consists of a detailed plan describing how to develop, maintain, replace and alter or enhance specific software. The life cycle defines a methodology for improving the quality of software and the overall development process.

Stage 1: Project Planning

The first stage of SDLC is all about “What do we want?” Project planning is a vital role in the software delivery lifecycle since this is the part where the team estimates the cost and defines the requirements of the new software.

Stage 2: Gathering Requirements & Analysis

The second step of SDLC is gathering maximum information from the client requirements for the product. Discuss each detail and specification of the product with the customer. The development team will then analyze the requirements keeping the design and code of the software in mind. Further, investigating the validity and possibility of incorporating these requirements into the software system. The main goal of this stage is that everyone understands even the minute detail of the requirement. Hardware, operating systems, programming, and security are to name the few requirements.

Stage 3: Design

In the design phase (3rd step of SDLC), the program developer scrutinizes whether the prepared software suffices all the requirements of the end-user. Additionally, if the project is feasible for the customer technologically, practically, and financially. Once the developer decides on the best design approach, he then selects the program languages like Oracle, java, etc., that will suit the software.

Once the design specification is prepared, all the stakeholders will review this plan and provide their feedback and suggestions. It is absolutely mandatory to collect and incorporate stakeholder’s input in the document, as a small mistake can lead to cost overrun.

Stage 4: Coding or Implementation

Time to code! It means translating the design to a computer-legible language. In this fourth stage of SDLC, the tasks are divided into modules or units and assigned to various developers. The developers will then start building the entire system by writing code using the programming languages they chose. This stage is considered to be one of the longest in SDLC. The developers need certain predefined coding guidelines, and programming tools like interpreters, compilers, debuggers to implement the code.

The developers can show the work done to the business analysts in case any modifications or enhancements are required.

Stage 5: Testing

Once the developers build the software, then it is deployed in the testing environment. Then the testing team tests the functionality of the entire system. In this fifth phase of SDLC, the testing is done to ensure that the entire application works according to the customer requirements.

After testing, the QA and testing team might find some bugs or defects and communicate the same with the developers. The development team then fixes the bugs and sends it to QA for a re-test. This process goes on until the software is stable, bug-free and working according to the business requirements of that system.

Stage 6: Deployment

The sixth phase of SDLC: Once the testing is done, and the product is ready for development, it is released for customers to use. The size of the project determines the complexity of the deployment. The users are then provided with the training or documentation that will help them to operate the software. Again, a small round of testing is performed on production to ensure environmental issues or any impact of the new release.

Stage 7: Maintenance

The actual problem starts when the customer actually starts using the developed system and that needs to be solved from time to time. Maintenance is the seventh phase of SDLC where the developed product is taken care of. According to the changing user end environment or technology, the software is updated timely.

What is JIRA?

JIRA is a software development tool used for project management and issue tracking. It is a popular tool among software development teams to plan, track, and release software projects. JIRA provides a centralized platform for managing tasks, bugs, and other types of issues and it helps teams to organize and prioritize their work. The tool integrates with other software development tools and has a variety of customizable features and workflows that allow teams to adapt it to their specific needs. Additionally, JIRA also provides various reporting and dashboard features that help teams stay on top of their work and make data-driven decisions.