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Department: Impact Training
Task Name: SDLC

SOFTWARE DEVELOPMENT LIFE CYCLE:

- Software Development Life Cycle (SDLC) is a structured process that is used to design, develop and test good-quality software and it is the cost effective and time-efficient process that development teams use to design and build high quality software
- SDLC is methodology that defines the entire process of software development step-by-step.
- The goal of the SDLC model is to deliver high quality, maintainable software that meets the user's requirements and to minimize the project risks through forward planning so that software meets the customer expectation during production.
- SDLC in software engineering models outlines the plan for each stage so that each stage of the software development model can perform its task efficiently to deliver the software at low cost within the given time frame.

The various phases(stages) of SDLC are:

Stage 1: Planning and Requirement Analysis

- In this there will be planning, defining the scope of the project, setting objectives and goals and resource planning.
- The quality of the project is a result of planning.

Stage 2: Design

- In this phase, developers analyze requirements and identify the best solutions to create the software.
- SRS is a reference for software designers to come up with the best architecture for the software. Hence, with the requirements defined in SRS, multiple designs for the product architecture are present in the Design Document Specification (DDS).

Stage 3: Development

- At this stage the fundamental development of the product starts.
- The development team codes the product. They analyze the requirements to identify smaller coding tasks that can be done by the developer(s) to achieve the result.
- It consists of development, coding standard, scalable code, version control, code review.

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Stage 4: Testing

- This stage combines automation and manual testing to check the software for bugs by the developers.
- Testing the software includes the quality analysis and checking if it meets the customer requirements, because many teams immediately test the code they write.

Stage 5: Deployment

- After the completion of developed software, they code and test on a different copy of the software than the one that the users have access to.
- There are several tasks involved in this phase such as packaging, environment configuration, and installation that all move the latest build copy to the production environment.

Stage 6: Maintenance

- In the maintenance phase, the team fixes bugs, resolves customer issues, and the changes in software will be managed. In addition, the team monitors overall system performance, security, and user experience to identify new ways to improve the existing software.