GROUP 3

GROUP PRESENTATION

SOFTWARE

Abstract

URBAN
GROUP 3 MEMBERS

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NAMES SIGNATURE

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SOFTWARE DEVELOPMENT LIFE CYCLE PHASES

1. **Planning**:
   - Project Initiation: The project's goals, scope, and objectives are defined.
   - Feasibility Study: Determine if the project is technically and financially viable.
   - Requirement Gathering: Collect and document detailed requirements from stakeholders.
2. **Analysis**:
   - System Design: Develop an architecture and design specifications based on requirements.
   - Functional Specifications: Define the system's functionality.
   - Non-Functional Specifications: Define performance, security, and other non-functional requirements.
3. **Design**:
   - High-Level Design: Create an overview of the system's architecture.
   - Low-Level Design: Develop detailed designs for components and modules.
   - Database Design: If applicable, design the database schema.
4. **Implementation**:
   - Coding: Write the actual code according to the design specifications.
   - Unit Testing: Test individual components or units of code.
   - Integration Testing: Test the interaction between different components.
   - Code Review: Peer review of code to find and fix issues.
5. **Testing**:
   - System Testing: Test the entire system to ensure it meets the requirements.
   - Acceptance Testing: Validate the system against user acceptance criteria.
   - Regression Testing: Re-testing to ensure that changes do not introduce new defects.
   - Performance Testing: Assess the system's performance and scalability.
6. **Deployment**:
   - Deployment to a production environment or distribution to end-users.
7. **Maintenance**:

- Ongoing support, bug fixes, updates, and enhancements.

In addition to these phases, some SDLC models incorporate iterative or incremental approaches, such as Agile, which involves cycles of planning, design, implementation, and testing in shorter iterations.

It's important to note that the actual process can be tailored to the specific needs of a project or organization, and the phases may overlap or be executed iteratively in different models. The choice of SDLC model and the specific phases used can depend on the project's size, complexity, and requirements.

PROJECT PLANNING CONCEPTS.

- **Project Scope**:
  - The scope defines the boundaries of the project, including what is and isn't included. It outlines the work that needs to be done to achieve the project's objectives.
- **Project Objectives**:
  - Project objectives are specific, measurable, achievable, relevant, and time-bound (SMART) goals that the project aims to achieve. These objectives guide the project planning process.
- **Work Breakdown Structure (WBS)**:
  - The WBS is a hierarchical decomposition of the project's work into smaller, manageable tasks. It helps in organizing and structuring the project's activities.
- **Gantt Chart**:
  - A Gantt chart is a visual representation of the project schedule, showing tasks and their durations over time. It helps in tracking progress and dependencies.
- **Critical Path**:
  - The critical path is the sequence of tasks in a project that, if delayed, would cause the project to be delayed. It's essential for identifying the most time-sensitive activities.
- **Resource Allocation**:
  - Planning involves identifying the resources required for the project, including personnel, equipment, and materials. Proper resource allocation is crucial for meeting project goals.

- **Project Timeline**:
    - The project timeline is a detailed schedule that specifies when each task or phase will start and end. It helps in coordinating activities and setting deadlines.
- **Risk Assessment and Management**:
    - Identifying potential risks and planning for their mitigation or management is a vital part of project planning. This ensures that unexpected issues are addressed effectively.
- **Stakeholder Engagement**:
    - Effective planning involves identifying and engaging with project stakeholders, including team members, clients, and other parties with an interest in the project's outcome.
- **Cost Estimation and Budgeting**:
    - Project planning includes estimating the costs associated with each task and creating a budget to ensure that the project stays within financial constraints.
- **Quality Planning**:
    - Planning for quality involves defining quality standards, processes, and metrics to ensure that the project delivers the expected level of quality.
- **Communication Plan**:
    - A communication plan outlines how project information will be shared, who needs what information, and through which channels. It ensures effective communication among project stakeholders.
- **Change Management**:
    - Preparing for potential changes in project scope or requirements and establishing a process for managing these changes is a crucial aspect of project planning.
- **Contingency Planning**:
    - Preparing for unforeseen events and having contingency plans in place to address them is a key part of project planning to ensure that the project can adapt to unexpected challenges.
- **Documentation**:
    - Keeping detailed records and documentation throughout the planning phase is essential for tracking progress and ensuring accountability

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