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Question:

Give 5 Job roles of each of the phases of a Waterfall Model ?

1. Documentation:

This phase is about gathering information and defining the "What."

- **Business Analyst:** Acts as the bridge between the client and the technical team to gather requirements.
- **Subject Matter Expert (SME):** Provides deep domain knowledge (e.g., banking or healthcare) to ensure requirements are accurate.
- **Technical Writer:** Drafts the formal Software Requirements Specification (SRS) document.
- **Project Manager:** Defines the project scope, timeline, and resource allocation.
- **Product Owner:** Represents the client's interests and signs off on the final requirements.

2. Design:

This phase focuses on the "How" and defines the technical architecture.

- **System Architect:** Designs the high-level technical structure and integration points of the application.
- **Database Administrator (DBA):** Designs the data models, schemas, and storage structures.
- **UI/UX Designer:** Creates the wireframes, prototypes, and visual design of the interface.
- **Network Engineer:** Plans the hardware infrastructure and security protocols required for the system.
- **Lead Developer:** Evaluates the tech stack and creates the System Design Document (SDD).

3. Implementation:

This is where the actual construction happens.

- **Front-End Developer:** Builds the user-facing part of the application using HTML, CSS, and JavaScript.

- **Back-End Developer:** Writes the server-side logic, APIs, and database integration code.
- **Full-Stack Developer:** Handles both the client-side and server-side coding tasks.
- **Unit Tester:** Often the developer themselves, ensuring their specific block of code works in isolation.
- **DevOps Engineer:** Manages the code repositories and ensures the development environment is stable.

4. Testing:

The system is assembled and checked for flaws.

- **QA Engineer:** Executes functional and non-functional test cases to find bugs.
- **Automation Tester:** Writes scripts to run repetitive tests automatically.
- **Security Analyst:** Tests the system for vulnerabilities and ensures data protection compliance.
- **Performance Tester:** Checks how the system handles high traffic and stress.
- **Integration Specialist:** Ensures that different modules or third-party services work together seamlessly.

5. Deployment

The software goes live and stays functional.

- **Release Manager:** Coordinates the final rollout of the software to production servers.
- **Support Engineer:** Provides technical assistance to end-users who encounter issues.
- **Site Reliability Engineer (SRE):** Focuses on system uptime, scaling, and automated recovery.
- **Maintenance Developer:** Handles "hotfixes" and patches for bugs discovered after launch.
- **Systems Administrator:** Manages the servers and monitors the health of the live environment.