Part 2: Comparing Software Development Methodologies Incremental Development (Agile): Principles: Incremental development, such as Agile methodologies (e.g., Scrum), emphasizes iterative development and delivery.Stakeholder involvement is limited to milestone reviews, with minimal scope for changes after project commencement.Challenges: Incremental development might face challenges in projects requiring strict adherence to initial requirements or in environments with regulatory constraints demanding upfront documentation and approval.For example, in developing a mobile app where user preferences and market trends may change rapidly, Agile allows for iterative enhancements based on user feedback.Challenges: Waterfall methodologies may face challenges in dynamic environments where requirements evolve or in projects requiring frequent stakeholder involvement and feedback.Each methodology offers distinct advantages and challenges, requiring careful consideration to align with project goals and constraints effectively.Waterfall Methodology: Principles: Waterfall is a linear software development methodology where each phase (requirements, design, implementation, testing, deployment) follows a sequential order.Disadvantages: Complexity in Coordination: Coordinating multiple iterations and managing dependencies can be challenging.Waterfall Methodology: Alternatively, the team follows a Waterfall approach for a government software project with fixed requirements and strict regulatory constraints.Understanding these methodologies equips project teams with the flexibility and adaptability needed to navigate diverse development scenarios successfully.Suitability: Incremental development is suitable for dynamic projects where flexibility and stakeholder involvement are critical.Regular stakeholder demos and feedback sessions ensure alignment with business needs and evolving market trends.Documentation Emphasis: Comprehensive documentation ensures clarity and .traceability of project artifacts

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