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<p><b><u>Key Takeaways from the Course</u></b></p> <p><b>Understanding Projects &amp; Scope</b></p> <ul style="list-style-type: none"><li>Projects have defined start/end points, use specific resources, and aim for clear goals.</li><li>Software projects are uniquely challenging due to <b>invisibility, complexity, conformity, and flexibility</b>.</li></ul> <p><b>Initiating a Software Project</b></p> <ul style="list-style-type: none"><li>A <b>project charter</b> outlines the purpose, objectives, and allocated resources.</li><li><b>Scope definition</b> ensures clarity in functionalities and expectations.</li></ul> <p><b>Effort &amp; Cost Planning</b></p> <ul style="list-style-type: none"><li>Accurate estimation is critical for project success.</li><li>Common models include <b>Function Point Analysis (FPA), Delphi Method, and COCOMO</b> for feasibility and budgeting.</li></ul> <p><b>Risk Identification &amp; Management</b></p> <ul style="list-style-type: none"><li>Risks can affect timelines, quality, and costs.</li><li>Effective management involves identifying risks, assessing impact, and employing strategies like <b>Avoidance, Transference, Mitigation, and Acceptance</b>.</li></ul>	<p><b><u>Applying Concepts to Real-World Scenarios</u></b></p> <p><b>Defining Project Scope (E-Learning Platform)</b></p> <ul style="list-style-type: none"><li>Use <b>user journey mapping</b> and <b>storyboarding</b> to pinpoint crucial features (e.g., course enrolment, streaming, tracking).</li><li>Early <b>stakeholder involvement</b> (educators, students) refines scope, ensuring user-centric design and future flexibility.</li></ul> <p><b>Estimating Effort &amp; Budget</b></p> <ul style="list-style-type: none"><li><b>Function Point Analysis (FPA)</b> helps quantify features like video uploads, live sessions, and activity tracking.</li><li>Complexity assessments (e.g., <b>low-latency Q&amp;A</b>) guide accurate resource allocation and cost forecasting.</li></ul> <p><b>Risk Mitigation via Agile</b></p> <ul style="list-style-type: none"><li><b>Iterative sprints</b> expose issues early (e.g., video streaming bottlenecks).</li><li>Solutions like <b>load testing</b> and <b>adaptive bitrate streaming</b> proactively address technical challenges, enhancing reliability.</li></ul>
<p><b><u>Learning Through Collaboration &amp; Peer Discussions</u></b></p> <p>Discussing the project for this course with my group members helped in understanding how different industries, such as finance and e-commerce, define scope and address ambiguity.</p> <p><b>Comparative Scope Definitions:</b> Group discussions revealed how finance projects prioritize <b>compliance</b>,</p>	<p><b><u>Obstacles Encountered During Learning</u></b></p> <p><b>Quantifying Risks:</b> Balancing <b>data-driven models</b> with <b>human intuition</b> proved challenging, as theory doesn't always account for on-the-ground nuances.</p> <p><b>Real-World Example:</b> In a financial software project, analytics flagged fraudulent transaction risks, but human insight revealed potential <b>downtime</b> during quarter</p>

**encryption, and secure transactions**, while e-commerce focuses on **user experience, scalability, and payment integration**.

**Tailored Approaches:** Seeing these **industry-specific** differences underscored the need to adapt scope definitions for unique challenges.

**Peer Feedback:** Collaborative insights on handling **ambiguity** and tracking changes sharpened my scope-planning skills and prompted more **proactive** issue resolution.

closures.

**Integrated Approach:** Combining both perspectives led to **redundancy measures** and **scaled transaction monitoring**, showcasing how a dual approach enhances risk mitigation.

### **Additional Learning Activities & Self-Improvement**

#### **Explored Articles on Medium**

##### **Case Studies on Legacy Migrations**

- I examined an article highlighting failures in **cloud adoption** within the finance sector due to underestimated complexity in **legacy systems** and **regulatory hurdles**.
- This piece emphasized **phased rollouts**, allowing teams to manage risks incrementally, and the importance of **stakeholder alignment** to anticipate unforeseen migration challenges.

#### **YouTube Videos on Risk Management**

##### **Chaos Engineering & Cross-Functional Teams**

- A video introduced **chaos engineering**, a practice of deliberately causing controlled system failures to test resilience.
- It highlighted how **cross-functional teams** spot blind spots early—like security vulnerabilities—driving proactive measures to bolster system stability.

### **Additional Learning Activities & Self-Improvement**

#### **Reading Further about Configuration Management & Project Planning**

##### **1. Configuration Management Exploration**

- Dive into **version control** systems and **automated deployment pipelines** to ensure software reliability and traceability.
- Investigate how consistent **configuration baselines** reduce errors and simplify rollback procedures in dynamic project environments.

##### **2. Advanced Project Planning Techniques**

- Study **resource allocation** strategies for balancing workloads and minimizing bottlenecks.
- Practice **adaptive scheduling** methods that accommodate evolving requirements and help maintain project momentum.

#### **Exploring Project Management Tools**

##### **Trello**

- Learn **task tracking, sprint planning, and team collaboration** functionalities to streamline communication and transparency.
- Observe how agile boards in these tools can **visualize progress**, helping teams identify and resolve issues swiftly.

By documenting my progress, I have been able to track how theoretical concepts translate into practical applications, ensuring continuous improvement in the course of Software Project Management.