Learning Journal
Software Project Management

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Key Concepts Learnt:

Chapter 6 (Project Planning):

1. Project planning involves a lot of different aspects like **risk** planning, planning of **resources**, planning of estimation of **cost** and **efforts**.
2. Project manager needs to think which **trade-off**s to make like increase efforts for a better product but with increased cost or reducing budget and delivering product with less resources and less reliability.
3. **Work breakdown structure** helps to organize the projects into different **millstones** so that project can be completed in phases.
4. Quality assurance teams play a significant role after every phase or milestone to make sure that none of the existing functionalities are broken and the new features are working as expected.
5. **Goldratt's Critical chain method** focuses on issues with traditional planning methods and promotes buffers between or after tasks.
6. It is very important to understand fundamentals, make **effective communication** and utilize resources efficiently for a better project planning and eventual success of the project.
7. Project planning is equally important in **iterative and agile methodologies** as in traditional ways of development.
8. Project planning even involves considering usage of programming languages for development, usage of necessary tools for the effective resource utilization.

All Chapters Revision for exam:

1. The main objective of project management is to achieve specified goals within the allocated **time**, **resources**, and **budget**.
2. Project managers need to take care from the perspective of management, stakeholders, and engineering team for the successful completion of a project.
3. Different phases of project management include initiation, planning, monitoring, control, and closure of project.

4. Project **charter** provides and overview of the project goals and how this project will be beneficial for the stakeholders.
5. Project scope estimates the time It would require for the project to be completed and features to be delivered.
6. **COCOMO** and Function Point Analysis (**FPA**) are common effort estimation techniques where we can use COCOMO where historical data is not available and FPA where previous project data is available.
7. Risks are unexpected events that can impact the outcomes of a project in a **negative** way.
8. Risks include but not limited to exceeding budget, delays in delivery of project, quality not up to the required standard of the project.
9. Risks can occur **at any time**, the best project manager can do is to be prepared for it.
10. Configuration management helps the team to store, organize, and retrieve the artifacts stored during the development of the product.
11. For parallel development tasks, it helps by providing mechanism for **branching**.

Application in Real Projects:

1. Project planning concepts are applied in real-world projects to have efficient allocation of resources, balancing effort, cost, and project quality.
2. Real world project makes sure to follow strategies to identify, prioritize and mitigate the risks that could impact the success of the project.
3. Configuration management tools are helping to improve **traceability** which is very critical for any organisation for software comprehension.
4. **Quality assurance** teams play a crucial role in real-world projects by doing thorough testing so that the product doesn't break after delivery.
5. In real world projects, making trade-offs between efforts, cost and time goes in parallel and all of these impacts the product in a negative or positive way based on the decisions made.

Reflections on Case Study/Project Pitch:

1. The case study on developing and managing our project "**Virtual Wedding Planning Concierge**" has helped to explore a different domain and how technology can make a significant impact in this area from a business perspective.
2. **Project pitch** done in the class for the project initial analysis helped the team to demonstrate its thinking process and convey them to the stakeholders.
3. It is now even more important to do the **feasibility study** and cost estimation for the kind of features we have thought about in the project initiation phase.
4. Market analysis plays a significant role in helping us understand our competition, what mistakes they did, and we should be avoiding making our product more successful.
5. Importance of **Total Addressable Market (TAM)** in any product is very important to analyze to have an understanding that how long this product will last or if its market

is very niche or not which is not very suitable for long term growth and evolution of any software product.

Collaborative Learning:

1. Interacting with teammates during project pitch preparation helped in refining key project messages and value propositions.
2. Learning from the ideas of other teams is as important as learning at our own.
3. Collaborative **decision-making** helped us make decisions like inclusion of Virtual Reality in our project pitch and how it will actually impact our customers in a positive way.
4. Working together on project charter, scope and objectives brought us together as a team on our aligned goal.
5. Interacting with actual customers (entire class during project pitch) as a team for selling our product helped us verify the problems of the customer which helped us as a team to proceed with the **feasibility study** of our software solution.

Challenges Faced:

1. **Selling a product** is not as simple as it may sound, how to convey our message as a group to the customers in the project pitch is a matter to think about.
2. Customers these days treat every AI/ML integration as a buzz word rather than actually thinking that yes, it is making an impact on the customer experience and is providing better service.
3. **Building trust** is a long process between a product and its customers but what steps can we take (probably inclusion of some features like chat history) for transparency?
4. In the case of fake weather alerts sent by the weather API to our customers to modify the arrangements, how to handle **false positives** effectively.
5. Figuring out that what features will make us standout in the tech market in the domain of our product?

Further Research/Readings:

1. Why are a lot of ed-tech start-ups emerging these days as it was a major topic of many project pitches in the course?
2. How to conduct actual feasibility study based on selected product features in the market?
3. Read about the **challenges related to budget** when integrating AR and VR in the product.
4. Are enough market resources in terms of manpower available which can help us to actually implement our features in the product from the perspective of project manager?

5. How configuration management can be **automated** and how useful insights can be taken from that data which will help the organisation to grow.

Adjustments to Goals:

1. In the upcoming build we will prioritize conducting **feasibility study** to access the feasibility of the features we as a team have thought of delivering to the customers.
2. We will focus on our **cost estimation** techniques to predict the resources required for project execution.
3. We as a team will learn about raising **funds from an investor** to have their expertise which we can use to deliver our product and gain eventual profits.
4. We need to be aware of the risks that might appear in our project and try to make plans for its mitigation at an early stage.
5. We as a team will assess our progress against the **milestones** that we have set and verify if we are moving in the right direction within the assigned time and resources.

References:

1. Ahmed, A. (2012). *Software project management: a process-driven approach*. CRC Press. Retrieved January 22, 2024, from https://concordiauniversity.on.worldcat.org/oclc/774289078