Learning Journal

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Key Concepts Learned:

In **Chapter 4** -The main concepts discussed was on **Risk Management** in project. The chapter states that there are always risk in any kind of project, like resource unavailability, service breakdown problems etc. So it was said to always start risk management steps at the initial time of the project, this clearly represents the importance risk management. Risk can be defined as the combination of the probability of an event and its negative consequence. There can be various kinds of risk in software project such as, **over budget, delay in delivery, quality of final product, unskilled labor etc**. Risk can affect the quality or rate of production in a project.

Risk assessment deals with mainly three sub parts which can be performed at the beginning of the project development and reassessed at the beginning of the iterations and they are:

- Risk identification
- Risk Analysis
- Risk Prioritization

There can be different kinds of risk associated with a project, which needs to be **categorized** mainly risks are categorized into Technology, People, Organization, Tools, Requirement and Estimation risks. **Major Software risk** types are **Resource**, **Technology**, **Budget**, **Quality** and **Time risks.** After that we discussed on the major causes of such risks on a project such as Quality constraints, resource unavailability, attrition, scope creep, poor management etc. We had a really good example in class based on risk assessment, We all assumed to be a manager of an organization and we were instructed to tackle a problem of building a project since it relies heavily on new technology.

Now we move onto the **Risk Analysis** part were we deal with **Qualitative and Quantitative Analysis** : **Qualitative** - the likelihood of occurrence, the impact on project, product and business of each risk item in scales of (Low, Moderate, Significant, High) and **Quantitative** - product of impact and probability. Now we move to the final part that is the **Risk Prioritization** that is some of the risk items may be unlikely to occur, and others may not be serious enough to raise any concern to determine the priority of each risk item in a quantitative model, we combine the two values, likelihood and impact this priority scheme helps push the big risks to the top of the list and the small risks to the bottom

Risk control comes with risk **planning**, **resolution** and **monitoring**. In Risk planning we have AARM(Acceptance - Avoidance - Risk transfer - Mitigation) strategies. Acceptance means that the project has decided not to change the project plan to deal with a risk or is unable to identify any other

suitable response strategy. Avoidance is defined as changing the project plan to eliminate the risk of the condition to protect the project goals and objectives from its impact. Transference involves shifting the consequence of a risk to a third party, together with ownership of the risk response. Transferring a risk gives someone else the responsibility for its management. It does not eliminate the risk. Mitigation reduces the probability and/or consequences of an adverse risk to an acceptable level.

Risk Reduction Leverage is the ratio of the reduction in risk exposure over the cost of the reduction
RRL = (RE(before)-RE(After)) / cost(Risk Reduction). Atlast we compared risk management among iterative model and waterfall model, benefit of **iterative software development lifecycle model is that it minimizes risks**. In the waterfall model, the software product is available for end user review only after the complete software product is built. If there were misunderstandings in getting end user requirements right then the software product built will not be suitable to the end users.

Reflections on Case Study/course work:

In the class we had live examples on the matter of risk management, we all assumed to be mangers of an organization and if we are given a project of high scope like after an initial assessment, we had determined that it is a **risky project** since it **relies heavily on new technology**. In this situation how do we estimate the risk factors and the cause of risk in this case. We had a brief discussion on this at the time of lecture and all came up with different ideas.
Also we were introduced to the steps in risk analysis and the quantitative analysis was much clear with the example in class. Likelihood and occurrence graph was also understood by the examples and situations like of the company IT project(needs high technology) discussed in class.

Collaborative Learning:

Class is active in Collaborative learning as we had many discussions in class and anyone can answer others doubts. During our discussions in class, I got to know that all have different idea on the risk management topic, some of my peers came up with purely technical risks while some came with industrial risk. I found out that both of the aligns to eachother. For project, we had one meeting to track the progress, and by now we have **completed the content** for the **project**, it was really collaborative with the team as all were there to help eachother. Now we have to align the project report with the right format and submit it.

Further Research/Readings:

I have already read chapter 4 in last week, since I was little familiar with the concepts by reading the chapter prior, all the concepts discussed in class was clear. Only in the quantitative analysis I had some doubts, but professor explained that part in the lecture with a good example of comparing it with the real life example, helped me to grasp that concept quickly. For this weeks lecture, I have read only chapter 5. Which is about Configuration management. Its a collective topic which cover too many sub topics inside it like planning ,documentation, version control systems etc. Last day I had the lecture and professor has covered chapter 5 and 6 in the class

Adjustments to Goals:

By yesterday we have covered all the topics for upcoming midterm exams, Since chapter 5 includes too many sub topics and chapter 6 I didnt read the textbook. For the upcoming week, planning to read both

chapter 5 and 6, clearing all the doubts from those chapters and for this week we dont have exercises to do, I ll have time to revise all the previous chapters for the coming midterm exams. Also yesterday professor has informed that the next lecture we will have a short pitch in of project, just need to discuss this with the team members and prepare for the same. Its less than two weeks for exam, so need to start reading and making small notes on the important topics.

Abbreviations:

SPM - Software Project Management.
AARM - Acceptance - Avoidance - Risk transfer - Mitigation
RRL - Risk Reduction Leverage