Learning Journal Week 2
Student Name: Jasmanpreet Kaur Bedi
Course: SOEN-6841: Software Project Management
Journal URL: https://github.com/jasmanpreet0209/Software-Project-Management-Learning-Journals
Week 2: January 25 – February 3
Date: February 2

Key Concepts Learned:
This week started by reflecting on the previous week's learnings about projects and project initiation activities including project scope, project charter and project objectives.
Moving further, I learned about:

1. **Effort Estimation Importance and Techniques:** Effort estimation is very important because it tells customers how much it will cost and when the project will be done and helps in using expensive resources wisely and making sure the right amount is billed, making accurate estimates key for successful projects. There are several techniques that can be used like:
   a. COCOMO - uses project size information from lines of code as well as project attributes available from current project.
   b. Wide Band Delphi – It is an Experience based technique used when there is some data available for the current project.
   c. Function Point Analysis – It uses historical project data as well as current data for estimation.
   For waterfall method, effort estimation is divided into phases, if there is some block in one stage of development like design, it does not mean the same conditions continue in another phase.
2. **Cost Estimation:** It provides calculations like cost associated with a project and its duration.
3. **Schedule estimation:** In some cases, schedule is greater than the effort. It is based on considering all tasks and trying to schedule some in parallel.
4. **Resource estimation:** Resources, along with their availability is determined.
5. **Risks:** They are unpredicted events that hinder the project development and pace. They can be external or internal and can have various causes like Quality constraints, resource unavailability, Scope creep, unavailability of valuable professionals etc. Risk Categories are mainly among Budget, Cost, Time, Resource, Quality and Technological Risks.
6. **Risk Analysis and Management**: Risk analysis considers the impact a risk can have along with the probability of it happening. Risks can prevail in any phase of development. Higher the impact of a risk and higher the probability, more important it is to manage that risk. Waterfall model is riskier than Agile models because the outcome is known after the project is completed. It is also important to keep the document measuring risks, their impact, probability, and techniques to manage updated.

Reflections on Case Study/course work:
The case study presents development by a SaaS vendor, estimating an initial 500,000 SLOC software with incremental development as their methodology. They initially give a lower estimate but after re-analyzing the time and speed constraints, they finally decided to work with a greater number of employees, put together a team of over 50 people for a lower monthly cost of $730,000 as their updated estimate. The current project, emphasizing appointment scheduling, highlights the importance of thorough testing due to complex logic implementation. Overall, the case study highlights the vendor's adaptability, strategic decision-making, and consideration of long-term goals in navigating the challenges of software product

development. This case study provided more clarity on effort and cost estimation in terms of linking the theoretical concepts to the practicality in real world.

Application in Real Projects:
The concepts learned hold key importance in real world projects. Risk Analysis and Management Strategies are very important because they enable identification, analysis and mitigation of challenges that could threaten a project's success. These concepts highlight the importance of planning the resources, budget, time in advance. Keeping Risk Management Strategies handy especially for the high probability and high impact projects helps in the smooth functioning of the project activities even in times of uncertainty.

Peer Interactions/Collaborations:
This week, there was a change in our group dynamics as one member left, and a new member joined in their place. To ensure a smooth transition, I took the initiative to interact with the new member and provide them with a comprehensive overview of the project. I also interacted with my fellow group mate to discuss about the market analysis research and finalize a few points for the project.

Challenges Faced:
While I didn't encounter significant challenges, I found myself a bit perplexed during the implementation of Function Point Analysis due to its intricate steps and weighting system. To overcome this confusion, I delved into relevant literature, consulting the book for a clearer understanding. I also sought clarity by visualizing the process using an example, enhancing my grasp of the concept.

Personal development activities:
The concepts learned helped me gain a deeper understanding of how project managers estimate budgets and risks and why they are important. Reading through the case studies helped me invoke my brain.

Further Research/Readings:
I am intrigued to go through the recommended reading 1 and 12 in the book chapter 3 named: P. Jalote (2002) Software Project Management in Practice, Addison-Wesley Professional, Boston, MA and R. T. Futrell, D. F. Shafer, L. I. Shafer (2002) Quality Software Project Management, Prentice Hall PTR, Upper Saddle River, NJ.

Adjustment to Goals:
My goals for the next week are to read the chapter 5 as recommended by the professor in class, as well as move forward with the project.