# *Systems III (420-E31-HR)*

# *Lab 4 – Project Management – Dependencies and Risk*

Date assigned: Tuesday, September 20, 2017

Date due: **Tuesday, September 20, 2017, 12:00 p.m.**

**Learning Objectives**

Upon successful completion of this lab exercise, the student will be able to:

* Recognize the difference between lead time and lag time
* Describe critical path and slack
* Identify project risk factors

To do:

Save this document as a Word document named **YourUserName\_E31\_L04\_Project\_Management.docx** in your 420-E31 folderin your home drive. The document will hold your answers for your lab.

**Part A – Project Plans**

1. For each of the following situations determine:

* Which is the predecessor and successor?
* What type of dependency do you need?
* Would you advise to add a lead or a lag or neither to the dependency?
  1. You gather the requirements (*Gather Requirements*) and then analyze them (*Analyze Requirements*).

**Gather requirements is the predecessor and analyzing requirements is the successor. This would be a finish-to-start dependency. You cannot begin analyzing the requirements until you have fully gathered them. I would say you can potentially add some lead time to this dependency, although I wouldn’t recommend it.**

* 1. You have to wait three weeks (*Apply for Permit*) to get a permit (*Receive Permit*).

**Apply for permit is the predecessor to receive permit. It would also be a finish to start dependency because to receive your permit you must 100% complete the application for it. There is lag time on this since you get the permit 3 weeks after your application is completed.**

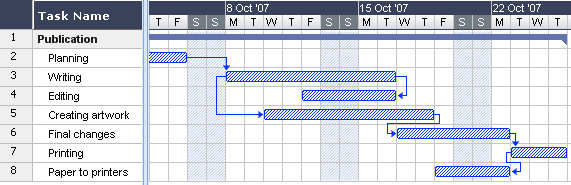
* 1. Halfway through the system analysis (*Perform System Analysis*) we typically start the programming (*Program Modules*).

***Perform system analysis* is the predecessor to *program modules*. This would be a start-to-start dependency since you must begin the analysis before beginning the coding, but you can work on both at the same time. There should be some lag between the two tasks so you’ve done at least some analysis prior to beginning the coding.**

* 1. The concrete foundation has to be finished and dry (*Pour Foundation*) before the walls can be erected (*Lay Bricks*).

***Pour foundation* is the predecessor to *lay bricks.* This is another finish to start since the dependent task requires the task it depends on to be completed. There is also some lag to allow drying of the concrete.**

1. Given the following Gantt chart, identify if the relationship between the tasks has lead time, lag time or nothing for each of the relationships listed below and explain why.



* 1. Relationship between *Planning* and *Writing*?

**This does not have lead or lag time. There is a break between the two tasks, but this is due to a weekend.**

* 1. Relationship between *Writing* and *Creating artwork*?

**I suppose there is some lag time here because the creating doesn’t begin until 2 days after the writing begins.**

* 1. Relationship between *Creating artwork* and *Final Changes*?

**There is a 2-day lead here because you begin making the final changes to certain parts while still working on others.**

* 1. Relationship between *Final Changes* and *Printing*?

**There is no lead or lag here. You finish one and immediately begin the next.**

1. Refer to the following web site and answer the following questions: <http://www.techrepublic.com/blog/tech-manager/why-critical-path-is-critical-to-project-management/2039>.
   1. When should the critical path be determined?
   2. What is the PMBOK definition of critical path?

**the sequence of schedule activities that determines the duration of the project.**

* 1. What is the author’s way of restating the definition?

**The critical path is simply all the tasks that determine the end date in your project schedule.**

* 1. What is the definition of slack?

**Slack is the amount of time a task can be delayed without impacting the start date of a subsequent task.**

* 1. How can a task with slack affect the critical path?

**If task ends up taking too long, then it will start stacking onto the critical path**

**Part B – Project Management**

1. Read the following case study and then answer the questions:

Pete is a project manager on a new systems development project. This project is Pete’s first experience as a project manager, and he has led his team successfully to the programming phase of the project. The project has not always gone smoothly, and Pete has made a few mistakes, but he is generally pleased with the progress of his team and the quality of the system being developed. Now that programming has begun, Pete has been hoping for a little break in the hectic pace of his workday.

Prior to beginning programming, Pete recognized that the time estimates made earlier in the project were too optimistic. However, he was firmly committed to meeting the project deadline because of his desire for his first project as project manager to be a success. In anticipation of this pressure problem, Pete arranged with the Human Resources department to bring in two new college graduates and two college co-op students to beef up the programming staff. Pete would have liked to find some staff with more experience, but the budget was too tight, and he was committed to keeping the project budget under control.

Pete made his programming assignments, and work on the programs began about two weeks ago. Now, Pete has started to hear some rumbles from the programming team leaders that may signal trouble. It seems that the programmers have reported several instances where they wrote programs, only to be unable to find them when they went to test them. Also, several programmers have opened programs that they had written, only to find that someone had changed portions of their programs without their knowledge.

* 1. Is the programming phase of a project a time for the project manager to relax? Why or why not?

**No, the project manager should not be relaxing during the programming phase of a project. The project manager shouldn’t relax on his project until it’s been successfully shipped out.**

* 1. What problems can you identify in this situation?

**The project manager decided to bring more developers in to solve the problem, which made the team grow in size and brought in people who don’t know the project.**

* 1. What advice do you have for the project manager?

**My advice to the project manager would be to not introduce new programmers at the last minute just to try and push the system out in time because they have potential to slow down the development of the system**

* 1. How likely does it seem that Pete will achieve his desired goals of being on time and within budget if nothing is done?

**I don’t think that it’s realistic for Pete to achieve either of these goals at this point. He’s brought on new people, which seems to be slowing things down, and it’s costing him more money to have them onboard.**

**Part C: Risk Management**

1. Read the case study titled “JetBlue and WestJet: A Tale of Two IS Projects” from Laudon. (<http://www.guillaumeriviere.name/estia/si/temoignages/story3.html>)
2. Answer the following questions:
   1. Why is it important to identify risks in a project?

**You need to identify the risks in a project so that you can take the correct steps to mitigate those risks, or be prepared to effectively handle the situation when something goes down.**

* 1. Evaluate the key risk factors of the projects to upgrade the reservation systems of WestJet and JetBlue.

**The risks for both systems is essentially the same, they risk something not working the way they expected, and for the system to fail. That’s in a nutshell what happened to WestJet and JetBlue risked the same thing, they just planned for that possibility better after watching WestJet fail.**

* 1. Classify and describe the problems that each airline faced in implementing its new reservation system. What management, organization, and technology factors caused those problems?

**WestJet faced several technical issues with the servers not being able to handle the load, the faced organizational issues with not having the customer service team that could handle this, and they faced management issues with trying to push this system out so quickly and not properly identifying possible delays in the data migration.**

* 1. Describe the steps that you would have taken to control the risk in these projects.

**I would’ve made it a slow deployment. I would’ve started moving archived data over to Sabre servers and then once all the old data was moved, I’d start moving current data over, then get data sent straight over to Sabre servers. I’d keep our existing systems up and running as long as possible so that once everything else has been moved, we can change to the new system where everything just gets dumped right into where all of our old data has been moved to. I feel like this happened because they made too fast of a transition. This shouldn’t have been a process that was completed over the course of a day or something, it should be a multi-day or week long process.**

**Marking Scheme**

|  |  |
| --- | --- |
|  | Marks |
| Part A Question 1 | 12 |
| Part A Question 2 | 8 |
| Part A Question 3 | 5 |
| Part B Question 1 – Case Study | 5 |
| Part C –Risk Management | 10 |
| Organization/English | 2 |
| Total | 42 |

**To submit**

When you have completed the assignment, upload the following documents to Moodle.

* **YourUserName\_E31\_L04\_Project\_Management.docx**