Project One – Planning Phase

# Part One: Project Management

A project has been defined to contain the following list of activities along with their required times for completion.

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| --- | --- | --- | --- |
| Activity Number | Immediate Activity | Time (weeks) | Predecessors |
| 1 | Collect Requirements | 3 |  |
| 2 | Analyze processes | 2 | 1 |
| 3 | Analyze data | 2 | 2 |
| 4 | Design processes | 6 | 2 |
| 5 | Design data | 3 | 3 |
| 6 | Design screens | 2 | 3,4 |
| 7 | Design reports | 4 | 4,5 |
| 8 | Programming | 5 | 6,7 |
| 9 | Test & document | 7 | 7 |
| 10 | Installation | 2 | 8,9 |

1. Based on this project, create a network diagram, and GANTT chart for this project.
2. Calculate the overall duration of this project, and show the critical path on your network diagram or GANTT chart.
3. What would happen to the project plan if activity 6 were revised with an estimated time of six weeks?
4. Assume that your team is in its first week of the project and has discovered that each of the activity duration estimates is wrong. Activity 2 will take only two weeks to complete. Activities 4 and 7 will each take three times longer than anticipated. All other activities will take twice as long to complete as previously estimated. In addition, a new activity, number 11, has been added. It will take one week to complete, and its immediate predecessors are activities 10 and 9. Adjust the network diagram or GANTT chart, and recalculate the earliest expected completion times.

# Part Two: Financial Feasibility

## Scenario One:

Assume you are put in charge of launching a new website for a local nonprofit organization. What costs would you need to account for? Make a list of expected costs and benefits for the project. You don’t need to list values, just sources of expense. Consider both one-time and recurring costs.

Consider the situation you addressed in the previous question. Create numeric cost estimates for each of the costs you listed. Calculate the net present value and return on investment. Include a break-even analysis. Assume a 10 percent discount rate and a five-year time horizon.

## Scenario Two:

Assuming monetary benefits of an information system at $85,000 per year, one-time costs of $75,000, recurring costs of $35,000 per year, a discount rate of 12 percent, and a five-year time horizon, calculate the net present value of these costs and benefits of an information system. Also calculate the overall return on investment of the project and then present a break-even analysis. At what point does breakeven occur?

## Scenario Three:

Assume monetary benefits of an information system of $40,000 the first year and increasing benefits of $10,000 a year for the next five years (year 1 = $50,000, year 2 = $60,000, year 3 = $70,000, year 4 = $80,000, year 5 = $90,000). One-time development costs were $80,000 and recurring costs were $45,000 over the duration of the system’s life. The discount rate for the company was 11 percent. Using a six-year time horizon, calculate the net present value of these costs and benefits. Also calculate the overall return on investment and then present a break-even analysis. At what point does breakeven occur?

# Part Three: Project Selection

1. What is an IS steering committee? What are its major functions? Typically, who serves on such a committee? Why do these committees exist?
2. Where do ideas for new information systems originate in organizations?
3. What criteria are typically used to determine which new information systems projects to develop? What arguments might Bob Petroski make for developing the proposed customer loyalty system?
4. Look at Fig 4-4 in the Modern Systems Analysis and Design text. What kind of information would you need to put together a table like this to present to the steering committee? How much of that information is objective? Subjective? Justify your answer.