Homework Week 3

1. What are the advantages and disadvantages of a Finite State Machine model compared to a Procedural model?
2. How do you implement a stoplight as a FSM?
3. What is a procedural model and why do most people consider FSM's a better way to implement embedded control applications.
4. What does PERT/CPM mean, and what is its origin?
5. Discuss the primary advantages of PERT/CPM.
6. Compare and contrast PERT/CPM and Gantt.
7. What advantages does the Gantt chart project schedule format offer?
8. What is a project bottleneck?
9. What are some of the considerations if a Gantt Chart needs to be updated?

Chapter 4: Exercise 1

Conduct a search using the Internet or published corporate annual reports to identify the corporate strategy of a company in which you might be interested in investing. Learn about the firm’s product lines and its newest products. How do these products support the corporate strategy? What types of projects would you expect to see in the product plan?

Chapter 5: Exercise 3

Choose a product that continually annoys you. Identify the needs the developers of this product missed. Why do you think these needs were not met? Do you think the developers deliberately ignored these needs?

Chapter 7: Thought Question 4

Could you apply the five-step method to an everyday problem like choosing the food for a picnic?

Chapter 8: Exercise 2

Propose a set of selection criteria for the choice of a battery technology for use in a portable computer.

Chapter 18: Exercise 1 (prepare a Gantt Chart instead of DSM)

The tasks for preparing a dinner (along with the normal completion times) might include:

a. Wash and cut vegetables for the salad (15 minutes).

b. Toss the salad (2 minutes).

c .Set the table (8 minutes).

d. Start the rice cooking (2 minutes).

e. Cook rice (25 minutes).

f. Place the rice in a serving dish (1 minute).

g. Mix casserole ingredients (10 minutes).

h. Bake the casserole (25 minutes).

Prepare a DSM for these tasks.