

|                    |   |
|--------------------|---|
| <b>COURSE CODE</b> | WIX2002   |
| <b>COURSE NAME</b> | PROJECT MANAGEMENT                                      |
| <b>SEMESTER</b>    | 1   |
| <b>SESSION</b>     | 2022/2023   |
| <b>LECTURER</b>    | Dr. Hema Subramaniam<br>Dr. Mohd Hairul Nizam Md. Nasir |
| <b>TUTORIAL</b>    | 4   |
| <b>TENTATIVE</b>   | Week 7 – Tutorial Session (1 Hour)                      |

### TUTORIAL INSTRUCTIONS

#### Question 1

Figure 1 shows a project network. **(Lecture notes 5 and 7)**

- a) Compute the early, late, and slack times. What is the project duration (in weeks)?

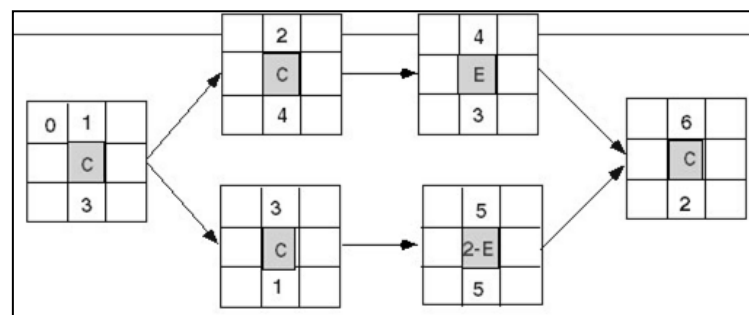


Figure 1: Project Network

- b) Assume only one Carpenter, and two Electricians are available, respectively. Using Figure 2, develop a loading chart of resources for Carpenters (C), and Electricians (E).

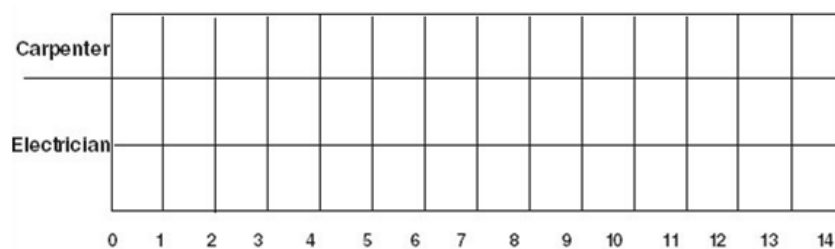
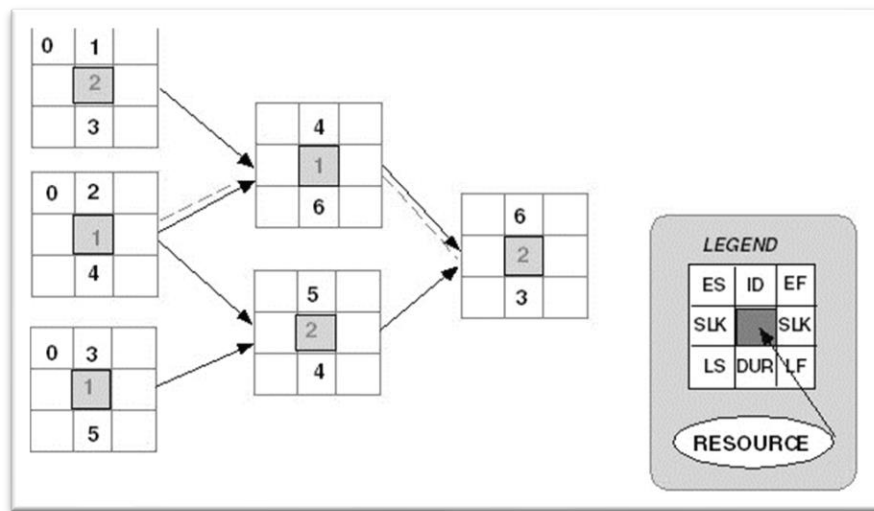


Figure 2: Loading Chart of Resources for C and E

- c) Based on your answers given (part b), compute the early, late, and slack times for the project. Draw the latest project network. Which activities are now critical? What is the project duration now?

**Question 2:**

Compute the early, late, and slack times for the activities as shown in Figure 3, assuming it is a **time constrained network**. (Lecture notes 5 and 7)



- a) Which activities are critical? What is the time constrained project duration with 3 maximum resource constraint?
- b) Using the parallel method and the following heuristics priority rules:

Minimum slack  
Smallest duration  
Lowest identification number

schedule the project only one period at a time. Keep a log of each activity change and the update that you make each period. Use the load chart to assist you in scheduling.

- c) List the order in which you scheduled the activities of the project. Which activities of the project are now critical?
- d) Based on your answers given (part c), re-compute the slack for each activity. What is the slack for activities: 1, 4 and 5?

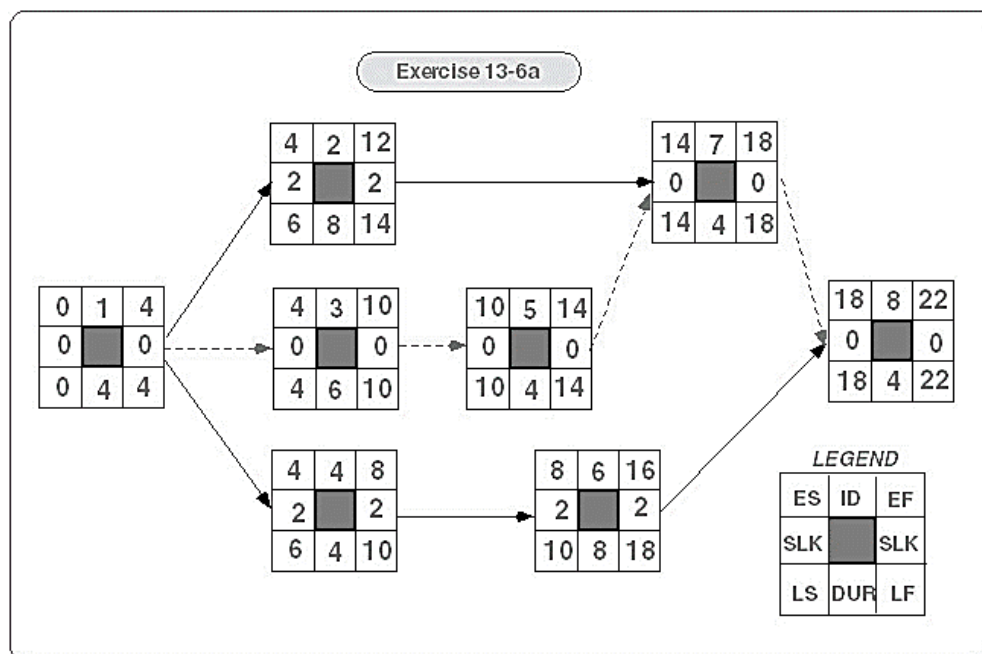
**Question 3:**

a). In month 9, a project has an earned value of RM2100, an actual cost of RM2000, and a planned cost of RM2400. Compute the SV and CV for the project. What is your assessment of the project?

b). On day 51 a project has an earned value of \$600, an actual cost of \$650, and a planned cost of \$560. Compute the SV, CV, and CPI for the project. What is your assessment of the project on day 51?

**Question 4:**

The following data have been collected for a British health care IT project for two-week reporting periods 2 through 12. Compute the SV, CV, SPI, and CPI for each period. Plot the EV and the AC on a summary graph. Plot the SPI, CPI and PCIB on a graph. What is your assessment of the project at the end of period 12?



## Exercise 13-6b

Baseline (PV)  
(00 \$)

| Task                | Dur. | ES | LF | Slack | PV<br>(00 \$) | 0 | 2 | 4 | 6  | 8  | 10  | 12  | 14  | 16  | 18  | 20  | 22  |
|---------------------|------|----|----|-------|---------------|---|---|---|----|----|-----|-----|-----|-----|-----|-----|-----|
| 1                   | 4    | 0  | 4  | 0     | 8             |   | 4 | 4 |    |    |     |     |     |     |     |     |     |
| 2                   | 8    | 4  | 14 | 2     | 40            |   |   |   | 10 | 10 | 10  |     |     |     |     |     |     |
| 3                   | 6    | 4  | 10 | 0     | 30            |   |   |   | 10 | 15 | 5   |     |     |     |     |     |     |
| 4                   | 4    | 4  | 10 | 2     | 20            |   |   |   | 10 | 10 |     |     |     |     |     |     |     |
| 5                   | 4    | 10 | 14 | 0     | 40            |   |   |   |    |    |     | 20  | 20  |     |     |     |     |
| 6                   | 8    | 8  | 18 | 2     | 60            |   |   |   |    |    | 20  | 20  | 10  | 10  |     |     |     |
| 7                   | 4    | 14 | 18 | 0     | 20            |   |   |   |    |    |     |     |     | 10  | 10  |     |     |
| 8                   | 4    | 18 | 22 | 0     | 30            |   |   |   |    |    |     |     |     |     |     | 20  | 10  |
| Period PV Total     |      |    |    |       |               |   | 4 | 4 | 30 | 35 | 35  | 50  | 30  | 20  | 10  | 20  | 10  |
| Cumulative PV Total |      |    |    |       |               |   | 4 | 8 | 38 | 73 | 108 | 158 | 188 | 208 | 218 | 238 | 248 |

## STATUS REPORT: ENDING PERIOD 2

| Task              | %Complete | EV | AC | PV | CV | SV |
|-------------------|-----------|----|----|----|----|----|
| 1                 | 50 %      |    | 4  |    |    |    |
| Cumulative Totals |           |    | 4  |    |    |    |

## STATUS REPORT: ENDING PERIOD 4

| Task              | %Complete | EV | AC | PV | CV | SV |
|-------------------|-----------|----|----|----|----|----|
| 1                 | Finished  |    | 10 |    |    |    |
| Cumulative Totals |           |    | 10 |    |    |    |

## STATUS REPORT: ENDING PERIOD 6

| Task              | %Complete | EV | AC | PV | CV | SV |
|-------------------|-----------|----|----|----|----|----|
| 1                 | Finished  |    | 10 |    |    |    |
| 2                 | 25%       |    | 15 |    |    |    |
| 3                 | 33 %      |    | 12 |    |    |    |
| 4                 | 0%        |    | 0  |    |    |    |
| Cumulative Totals |           |    | 37 |    |    |    |

## STATUS REPORT: ENDING PERIOD 8

| Task | %Complete | EV | AC | PV | CV | SV |
|------|-----------|----|----|----|----|----|
| 1    | Finished  |    | 10 |    |    |    |
| 2    | 30 %      |    | 20 |    |    |    |
| 3    | 60 %      |    | 25 |    |    |    |
| 4    | 0 %       |    | 0  |    |    |    |

|                   |  |    |  |  |  |
|-------------------|--|----|--|--|--|
| Cumulative Totals |  | 55 |  |  |  |
|-------------------|--|----|--|--|--|

STATUS REPORT: ENDING PERIOD 10

| Task              | %Complete | EV | AC  | PV | CV | SV |
|-------------------|-----------|----|-----|----|----|----|
| 1                 | Finished  |    | 10  |    |    |    |
| 2                 | 60 %      |    | 30  |    |    |    |
| 3                 | Finished  |    | 40  |    |    |    |
| 4                 | 50 %      |    | 20  |    |    |    |
| 5                 | 0 %       |    | 0   |    |    |    |
| 6                 | 30%       |    | 24  |    |    |    |
| Cumulative Totals |           |    | 124 |    |    |    |

STATUS REPORT: ENDING PERIOD 12

| Task              | %Complete | EV | AC  | PV | CV | SV |
|-------------------|-----------|----|-----|----|----|----|
| 1                 | Finished  |    | 10  |    |    |    |
| 2                 | Finished  |    | 50  |    |    |    |
| 3                 | Finished  |    | 40  |    |    |    |
| 4                 | Finished  |    | 40  |    |    |    |
| 5                 | 50 %      |    | 30  |    |    |    |
| 6                 | 50%       |    | 40  |    |    |    |
| Cumulative Totals |           |    | 210 |    |    |    |

| Period | SPI | CPI | PCIB |
|--------|-----|-----|------|
| 2      |     |     |      |
| 4      |     |     |      |
| 6      |     |     |      |
| 8      |     |     |      |
| 10     |     |     |      |
| 12     |     |     |      |

**END OF INSTRUCTION-**