Software Engineering Lab

Direction Lab #5
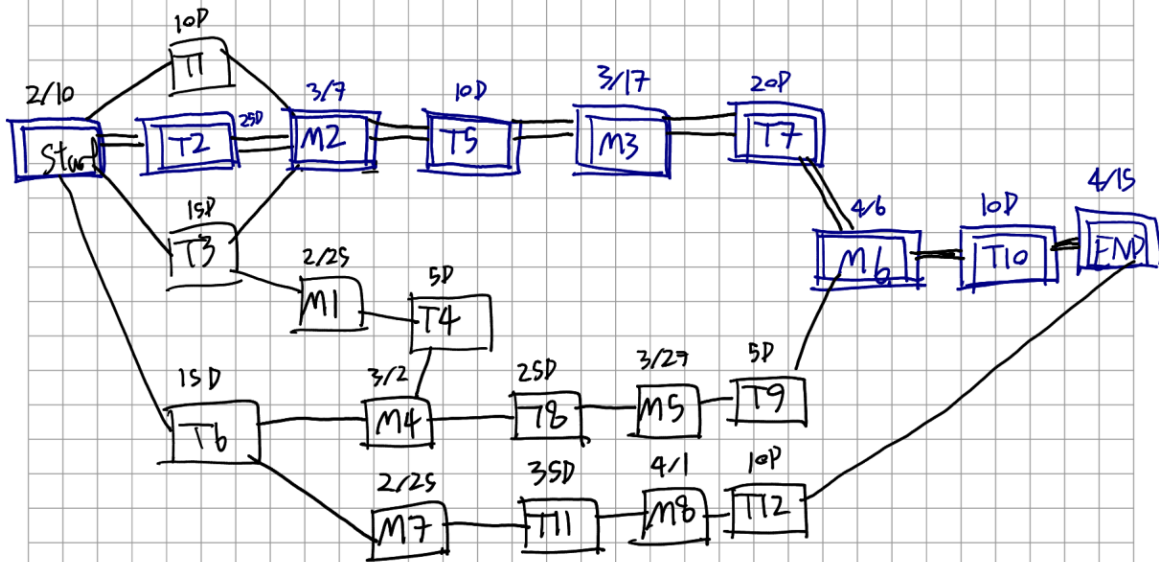
10th February 2022

1. The table below summarizes the tasks in a project. Draw **an activity network** and **a Gantt chart** of this project by hand on the space below, assuming **the start date is today**. Then determine the critical path and the expected finish date of the project.
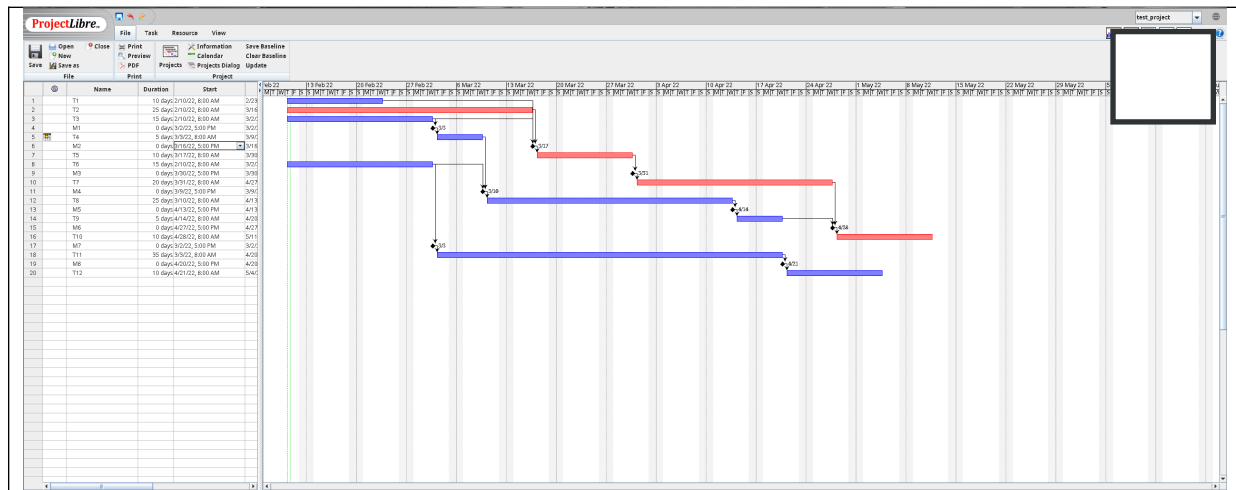
Task	Duration (days)	Predecessors
T1	10	
T2	25	
T3	15	
T4	5	T3 (M1)
T5	10	T1, T2, T3 (M2)
T6	15	
T7	20	T5 (M3)
T8	25	T4, T6 (M4)
T9	5	T8 (M5)
T10	10	T7, T9 (M6)
T11	35	T6 (M7)
T12	10	T11 (M8)

Start

1 BOX = 3 D

65 Days

T1 — 1S
T2
T3 — 5
M1 — 2/29 — 5
T4 — 5
M2 — 3/7
T5
5
T6 — 5
M3 — 3/7
T7 — 5
M4 — 3/2
T8 — 5
M5 — 3/29 — 5
T9 — 5
M6 — 4/6
T10 — 5
M7 — 2/23
T11 — 5
M8 — 3/4/1 — 5
T12 — 5

Finish date
4/15

END

65 Days

10D
T1

2/10   3/7   10D   3/17   20D
Start   T2 25D M2   T5   M3   T7

15D   4/6   10D   4/15
T3   2/25   M6   T10   END
      M1   5D
            T4

15 D   3/2   25D   3/27   5D
T6   M4   T8   M5   T9

            2/25   35D   4/1   10D
            M7   T11   M8   T12

2. Create a new project file in Project Libre and input the task table in question 1. Use Project Libre to generate a network diagram and a Gantt chart. Also, use the program to find the critical path and the expected finish date of the project.

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3. Imagine that you and your team are hired by a software company to develop a website which provides information about the restaurants in Thailand. List all the **tasks** involved in this project (including their **durations** and **dependencies**). Then use Project Libre to create your software development plan. The following are some of the common tasks in a website development project. You may add other tasks, you think, necessary.

Requirement
- Fact finding
  - Study an existing similar website
  - Do a survey on restaurants
- Identify the functions of the website
- Identify restaurant data and classification
- Obtain server requirement (hardware and software)
- Prototyping
  - Design mock-ups screens
  - Create mock-ups screens
- Prepare requirement specification

Design
- Design the data model
- Design the user interface
  - Layout design
  - Artwork design
- Design the software architecture

Implementation
- Set up the development environment
  - Set up the development servers
  - Set up the development computers
- Implement the data model
  - Set up the development DBMS
  - Create databases
- Programming
  - Client-side coding
  - Server-side coding

- Graphics
    - Create graphic files
  - Integration

Data Collection
  - Obtain restaurant data
  - Data entry

Testing
  - Unit testing
  - GUI testing
  - Integration testing
  - End-user testing
    - Alpha testing
    - Beta testing

Deployment
  - Arrange web hosting
  - Install website

Milestone 1
  - Requirement specification completed
  - Customers agreed with the specification

Milestone 2
  - Design documents completed

Milestone 3
  - Implementation completed

Milestone 4
  - Testing passed

Milestone 5
  - Website deployed

Group Homework: Working as a group (i.e. your SE project group), use Project Libre to create a schedule for your team development activities of the SE Python project. This project schedule contains a Gantt chart and a network diagram of your team SE Python project.

Put this project schedule in your project proposal to submit as this homework; the proposal contains

- Project title and team members (with their names and student IDs)
- Project description (at least 1 page long)
- Draft UI Design (at least 2 screens)
- Breakdown of the software project activities and their durations
- Project plan (your project schedule) printed from Project Libre