**Exercise 2**

1. Build a Gantt chart based on the list of tasks and dependencies given in Table 1 to build and test a screen form for a new system. Identify the critical path and analyse it. What do you see? Any explanations?

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Description** | **Duration in days** | **Predecessor** |
| 1 | Start | 0 | none |
| 2 | Meet with users | 2 | 1 |
| 3 | Review existing forms | 1 | 1 |
| 4 | Identify and specify fields | 3 | 2, 3 |
| 5 | Build initial prototype | 2 | 4 |
| 6 | Develop test data (valid data) | 4 | 4 |
| 7 | Develop error test data | 2 | 6 |
| 8 | Test prototype | 3 | 5, 7 |
| 9 | Make final refinements | 3 | 8 |

Table 1

1. Table 2 contains a list of tasks a student must do when intending to study abroad. Using Microsoft Project and the details given in Table 2 build the following three project schedules and build their Gantt and PERT/Network charts. State your assumptions for each version.
   1. The first schedule: Create a schedule and save it as Task 2 First Schedule. Assume that the predecessor tasks must finish before the succeeding task can begin (the simplest version).
   2. The second schedule: Identify at least one task that can begin a few days before the end of the predecessor task. **Justify your selection**…Change the lag time and save the schedule as Task 2 Second Schedule. Analyse the chart. What do you notice?
   3. The third schedule: Use the second schedule to identify at least one task that can begin a few days after the end of its predecessor task. Update the schedule accordingly and save it as Task 2 Third Schedule. **Justify your selection.** How many tasks you were able to identify…**Analyse the chart.** What do you notice?

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Description** | **Duration in days** | **Predecessor** |
| 1 | Obtain forms from the international exchange office | 1 | none |
| 2 | Fill out and send in the foreign university application | 3 | 1 |
| 3 | Receive approval from the foreign university | 21 | 2 |
| 4 | Apply for scholarship | 3 | 2 |
| 5 | Receive notice of approval for scholarship | 30 | 4 |
| 6 | Arrange financing | 5 | 3, 5 |
| 7 | Arrange for housing in dormitory | 25 | 6 |
| 8 | Obtain a passport and the required visa | 35 | 6 |
| 9 | Send in preregistration forms to the university | 2 | 8 |
| 10 | Make travel arrangements | 1 | 7, 9 |
| 11 | Determine shopping requirements and go shopping | 10 | 10 |
| 12 | Pack and make final arrangements to leave | 3 | 11 |
| 13 | Travel | 1 | 12 |
| 14 | Move into the dormitory | 1 | 13 |
| 15 | Finalise registration for classes and other university paperwork | 2 | 14 |
| 16 | Begin classes | 1 | 15 |

Table 2