# MODULE 3: WORKING WITH TASKS

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## Exercise 1. Changing Working Time (Start Date 1/11/2024)

|  |  |  |  |
| --- | --- | --- | --- |
| ID | TASK NAME | PREDECESSOR | DURATION |
| 1 | clean machine | NaN | 5 days |
| 2 | load raw materials | 1 | 3 days |
| 3 | prime machine | 2 | 3 days |
| 4 | Test run | 3 | 1 day |
| 5 | clean machine | 4 | 5 days |
| 6 | load raw materials | 5 | 3 days |
| 7 | prime machine | 6 | 3 days |
| 8 | Test run | 7 | 1 day |

Create the summary tasks for series tasks below:

* Summary task name is **Boy’s Toy** for tasks 1,2,3,4
* Summary task name is **Girl’s Toy** for tasks 5,6,7,8
* Add the **Ready for production task** (0 day) that is the end task of the task list
* Summary Task name is **Workshop** for **Boy’s Toy**, **Girl’s Toy, and Ready for production tasks**
* Display the Project Information.
* View Project Timeline, Gantt Chart, view CP, Total Slack and capture the result of them

## Exercise 2. Changing Working Time (Start Date 1/11/2024)

* Using the diagram below, create a list of tasks to model this process.

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **TASK NAME** | **PREDECESSOR** | **DURATION** |
| 1 | Visit estate agents | NaN | 1 days |
| 2 | View properties | 1 | 2 days |
| 3 | Decide what to buy | 2 | 5 days |
| 4 | Make offer | 3 | 0 day |
| 5 | Wait for decision | 4 | Don't know |
| 6 | Offer accepted | 5 | 0 days |

* Create the summary task is Buy a shop that contains all tasks in the project.
* Establish the duration of **Wait for a decision task** is 7 days.
* Change the duration of **View properties task** to **7 days**.
* Display the Project Information.
* View Project Timeline, Gantt Chart, view CP, Total Slack and capture the result of them.

## Exercise 3. Scheduling – Task dependencies

**Create the list of tasks to model this processing (Start date: 10/10/2024)**

|  |  |  |
| --- | --- | --- |
| **ID** | **TASK NAME** | **Duration** |
| 1 | Creating architectural plans | 3 wks |
| 2 | Submit plans for approval | 1 mon |
| 3 | Order materials | 8 days |
| 4 | Erect fencing | 3 days |
| 5 | Erect site building | 4 days |
| 6 | Clear and level site | 3 wks |
| 7 | Prepare drainage infrastructure | 1 wk |
| 8 | Prepare cabling infrastructure | 1 wk |
| 9 | Pour foundations | 4 days |
| 10 | Erect steelwork | 3 mons |
| 11 | Erect wall | 2 mons |
| 12 | Install roofing superstructure | 2 wks |
| 13 | Install roofing retracting mechanism | 1 wk |
| 14 | Erect seating tiers | 3 wks |
| 15 | Fit all windows and doors | 2 wks |
| 16 | Install electrical cabling | 1 wk |
| 17 | Install electrical fittings and fixtures | 2 wks |
| 18 | Install all plumbing | 2 wks |
| 19 | Install plumbing fixtures and fittings | 1 wk |
| 20 | Lay astro turf | 1 wk |
| 21 | Erect handrails and fencing | 2 wks |
| 22 | Paint rooms, fixtures, fittings, etc. | 1 mon |
| 23 | Install PA system | 2 days |
| 24 | Install video imaging equipment | 3 days |
| 25 | Fit out control room | 1 wk |
| 26 | Test roof mechanism | 1 wk |
| 27 | Test PA system | 2 days |
| 28 | Test video imaging equipment | 2 days |
| 29 | Test control room equipment | 1 wk |
| 30 | Obtain official occupancy | 1 day |
| 31 | Obtain safety certification | 2 days |
| 32 | Official opening | 1 day |

**Create the summary tasks for series tasks below:**

* Summary task name is **Planning (20 days)** for tasks 1,2,3.
* Summary task name is **Site Works (15 days)** form task 4 to task 8.
* Summary task name is **Building Construction (60 days)** form task 9 to task 14.
* Summary task name is **Fit Out (20 days)** form task 15 to task 25.
* Summary task name is **Commissioning (5 days)** form task 26 to the end task.

**Create the milestones for this project below:**

|  |  |  |
| --- | --- | --- |
| **No** | **Milestone** | **At End Of phrases** |
| 1 | Planning Completed | Planning |
| 2 | Site Works Completed | Site works |
| 3 | Building Construction Completed | Building Construction |
| 4 | Fit Out Completed | Fit out |
| 5 | Commissioning Completed | Commissioning |

**Creating Dependencies in Task Entry**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **TASK NAME** | **Duration** | **Dependencies** |
| **1** | Planning |  |  |
| **2** | Creating architectural plans | 3 wks | 1 |
| **3** | Submit plans for approval | 1 mon | 2 |
| **4** | Order materials | 8 days | 3 |
| **5** | Planning Completed | 0 | 2, 3, 2004 |
| **6** | Site works |  | 5 |
| **7** | Erect fencing | 3 days | 6 |
| **8** | Erect site building | 4 days | 7 |
| **9** | Clear and level site | 3 wks | 8 |
| **10** | Prepare drainage infrastructure | 1 wk | 9 |
| **11** | Prepare cabling infrastructure | 1 wk | 9 |
| **12** | Site works Completed | 0 | 7, 8, 9, 10, 11 |
| **13** | Building Construction |  | 12 |
| **14** | Pour foundations | 4 days | 13 |
| **15** | Erect steelwork | 3 mons | 14 |
| **16** | Erect wall | 2 mons | 15 |
| **17** | Install roofing superstructure | 2 wks | 16 |
| **18** | Install roofing retracting mechanism | 1 wk | 17 |
| **19** | Erect seating tiers | 3 wks | 18 |
| **20** | Building Construction Completed | 0 | 14, 15, 16, 17, 18, 19 |
| **21** | Fit Out |  | 20 |
| **22** | Fit all windows and doors | 2 wks | 21 |
| **23** | Install electrical cabling | 1 wk | 21 |
| **24** | Install electrical fittings and fixtures | 2 wks | 23 |
| **25** | Install all plumbing | 2 wks | 21 |
| **26** | Install plumbing fixtures and fittings | 1 wk | 25 |
| **27** | Lay astro turf | 1 wk | 21 |
| **28** | Erect handrails and fencing | 2 wks | 21 |
| **29** | Paint rooms, fixtures, fittings, etc. | 1 mon | 28 |
| **30** | Install PA system | 2 days | 23 |
| **31** | Install video imaging equipment | 3 days | 23 |
| **32** | Fit out control room | 1 wk | 29, 30, 31 |
| **33** | Fit Out Completed | 0 | 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32 |
| **34** | Commissioning |  | 33 |
| **35** | Test roof mechanism | 1 wk | 34 |
| **36** | Test PA system | 2 days | 33 |
| **37** | Test video imaging equipment | 2 days | 33 |
| **38** | Test control room equipment | 1 wk | 35, 36, 37 |
| **39** | Obtain official occupancy | 1 day | 38 |
| **40** | Obtain safety certification | 2 days | 39 |
| **41** | Official opening | 1 day | 40 |
| **42** | Commissioning Completed | 0 | 35, 36, 37, 38, 39, 40, 41 |

Display the Project Information.

* View the project in Gantt Chart and define CP and Project Slack
* Choose **Gantt Chart Format** tab  check on ***Critical Tasks*** in ***Bar Styles.***



* *Check on* ***Slack*** in ***Bar Styles*** slack lines in non-critical tasks
* On the table data Add column **Late Start**, **Late Finish**, **Total Slack**