

MODULE 1: Management Studio

Exercise 1. Creating a link

Creating the following tasks (*Project Start Date 1/10/2021*)

| ID | TASK NAME | PREDECESSOR | DURATION |
|----|-----------------------|-------------|----------|
| 1 | Research destinations | - | 2 days |
| 2 | Book flights | 1 | 1 day |
| 3 | Prepare and pack | 2 | 5 days |
| 4 | Fly out | 3 | 1 day |
| 5 | Relax in the sun | 4 | 7 days |
| 6 | Fly home | 5 | 1 day |
| 7 | Peel | 6 | 7 days |

- Display the Project Information
- View Project Timeline, Gant Chart, Network Diagram and capture the result them.

Exercise 2. Setting duration

Creating the following tasks (*Project Start Date 1/10/2021*)

| ID | TASK NAME | PREDECESSOR | DURATION |
|----|------------------|-------------|----------|
| 1 | Quarry stone | - | 2 days |
| 2 | Transport stone | 1 | 1 days |
| 3 | Prepare stone | 2 | 5 days |
| 4 | Fill foundations | 1,3 | 1 day |
| 5 | Level ground | 2,3 | 1 day |
| 6 | Measure site | 1 | 7 days |
| 7 | Mark out site | 5 | 5 days |
| 8 | Acquire stone | 2,4 | 3 days |
| 9 | Prepare site | 5,3 | 9 days |
| 10 | Build | 8,9 | 2 days |

- Display the Project Information
- View Project Timeline, Gant Chart, Network Diagram and capture the result of them.

Exercise 3. Creating phases

Creating the following tasks (*Project Start Date 1/10/2021*)

| ID | TASK NAME | PREDECESSOR | DURATION |
|----|---------------------------------|-------------|----------|
| 1 | Pre-heat oven | - | 5 mins |
| 2 | Prepare meat | 1 | 5 mins |
| 3 | Prepare veg | 2 | 5 mins |
| 4 | Heat pan | 3 | 5 mins |
| 5 | Fry veg | 4 | 5 mins |
| 6 | Brown meat | 5 | 5 mins |
| 7 | Add stock and bring to a simmer | 6 | 5 mins |
| 8 | Cook in oven | 7 | 45 mins |

- Group the eight tasks so that the first task becomes a summary task (Make a casserole 1 day?)
- Display the Project Information
- View Project Timeline, Gant Chart, Network Diagram and capture the result of them.

Exercise 4. Noah - Linking

Create the following links (*Project Start Date 1/10/2021*)

| ID | TASK NAME | PREDECESSOR | DURATION |
|----|---------------------|-------------|----------|
| 1 | Build boat | - | 7 days |
| 2 | Load supplies | 1 | 3 days |
| 3 | Load family | 1 | 6 days |
| 4 | Load animals | 1 | 7 days |
| 5 | Collect animals A-M | 1,4 | 12 days |
| 6 | Collect animals N-Z | 2,4 | 10 days |
| 7 | Float around | 5,6 | 7 days |

- Display the Project Information
- View Project Timeline, Gant Chart, Network Diagram and capture the result of them.

Exercise 5. Pyramid - Multi level grouping

Create the following links (*Project Start Date 1/10/2021*)

| ID | TASK NAME | PREDECESSOR | DURATION |
|----|------------------|-------------|----------|
| 1 | Build a pyramid | - | 1 day? |
| 2 | Acquire stone | 1 | 1 day? |
| 3 | Quarry stone | 2 | 3 wks |
| 4 | Transport stone | 3 | 5 days |
| 5 | Prepare stone | 4 | 3 wks |
| 6 | Prepare site | 5 | 1 day? |
| 7 | Dig foundations | 6 | 3 wks |
| 8 | Fill foundations | 7 | 2wks |
| 9 | Level ground | 8 | 1wk |
| 10 | Measure site | 9 | 7 days |
| 11 | Mark out site | 10 | 7 days |
| 12 | Build | 11 | 6 mons |

- Group the tasks as indicated above with 3 levels:
 - Level 1 at task 1 includes task 2,6,12
 - Level 2 at task 2 includes task 3,4,5, task 6 includes task 7,8,9,10,11
- Display the Project Information
- View Project Timeline, Gant Chart, Network Diagram and capture the result of them.

Exercise 6. Creating a plan for Staff Training

(Project Start Date 1/10/2021)

| ID | TASK NAME | PREDECESSOR | DURATION |
|----|-----------------------------------|-------------|----------|
| 1 | Start with a skills gap analysis. | - | 7 days |
| 2 | Identify employees for career | 1 | 3 days |

| | | | |
|----|---|----|---------|
| 3 | Align with employee and company goals. | 2 | 6 days |
| 4 | Help them grow with you | 3 | 7 days |
| 5 | <i>Use employee development plan</i> | 4 | 1 days? |
| 6 | Consider an individual employee | 5 | 2 wks |
| 7 | A succession planning template | 6 | 1wks |
| 8 | <i>Fit the learning opportunity to the training</i> | 7 | 1 days? |
| 9 | Microlearning | 8 | 2 wks |
| 10 | On-the-job training | 9 | 5wks |
| 11 | Augmented reality | 10 | 1wks |
| 12 | Track results to inform your decisions | 11 | 7 days |

- Group the tasks as indicated above with 3 levels:
 - Level 1 at task 1,2,3,4,5,8,12.
 - Level 2 at task 5 includes task 6,7 and task 8 includes task 9,10,11
- Display the Project Information
- View Project Timeline, Gant Chart, Network Diagram and capture the result of them.

Exercise 7. Recurring task

Create plan for a software project (*Project Start Date 1/10/2021*)

| ID | TASK NAME | PREDECESSOR | DURATION |
|----|-----------------------|-------------|----------|
| 1 | Planning | - | 1 wk |
| 2 | Requirement documents | 1 | 2 wks |
| 3 | Sign off | 2 | 1 day |
| 4 | Development | 3 | 10 wks |
| 5 | Testing | 4 | 4 wks |
| 6 | Implementation | 5 | 2 wks |
| 7 | Review | 6 | 1 wk |

- Add in a weekly meeting to run throughout the project with the following settings
 - Name: Breakfast Meeting
 - Duration: 1 hour
 - Recurrence: Weekly
 - Day: Monday
 - Range: 08/11/2021 at 07:00 to end of the project.
 - Calendar: Standard
- Display the Project Information
- View Project Timeline, Gantt Chart, Network Diagram and capture the result of them.

Exercise 8. Travelling – task calendar

You intend to travel from HCM to Kuala Lumpur, Bangkok and then, come back to HCM. Creating a plan for your trip.

MODULE 2: CALENDARS AND SCHEDULING

Exercise 1. Changing Working Time

Open project file Ex5 (Module 1), Use the **Project Information** dialog box to:

- Schedule the project from a Project Start Date of **1 June 2022**;
- Choose an overall project calendar of **Standard**
- The office will shut down for 2 weeks in the summer. Use the **Change Working Time** dialog box to create an **Exception** called "**Summer Shutdown**" and make the first 14 days of **August** nonworking time
- Display the Project Information

Exercise 2. Changing Working Time

Open project file Ex4 (Module 1) Use the **Project Information** dialog box to:

- Schedule it to start on **1 Dec 2021**. The project will be based upon the **Standard** calendar.
- Go to the **Change Working Time** dialog box and create an **Exception** to the **Standard** calendar called "**Xmas Bank Holidays**". This needs to make 25 and 26 December 2021 into nonworking time.
- Use the **Work Weeks** tab to change the **Standard** calendar's default working week. This project's standard working time is:
 - 08:30 to 17:30 Monday to Thursday (no lunch break)
 - 08:30 to 16:00 on Fridays (no lunch break)
 - Add a new Work Week to the **Standard** calendar named "**Xmas Slowdown**". Use this to model a 12:30 finish on every weekday from 15 to 31 December 2021.
 - Display the Project Information.

Exercise 3. Part Time - creating new calendar

Open project file Ex2 (Module 1), Use the **Project Information** dialog box to:

- Schedule it to start on **11 March 2022**. This project should be based upon the **Standard** calendar.
- A part-time worker will be used on this project. Go to the **Change Working Time** dialog box and create a new copy of the **Standard** calendar, calling it "Part Timer".
- Update the working time of your new calendar so that:
 - Mondays to Fridays are nonworking time
 - The remaining 2 weekdays have working time of 10:00 to 15:00 (with no breaks)

- The part timer has also booked a holiday to US from 2 to 11 September. Create an **Exception** to their calendar with a sensible name and model these days as nonworking
- Although the overall project will be based upon the Standard calendar (as per the Project Information dialog box), feel free to format the Gantt Chart to show the nonworking time for your new Part Timer calendar.
- Display the Project Information.

Exercise 4. Changing Working Time

- Open project file Ex6 (Module 1), Use the **Project Information** dialog box to schedule it to start on **Nov 1st** of next year.
- Modify the **Standard** calendar and change the **[Default]** work week to use the hours shown below:

Details for '[Default]'

Set working time for this work week

Select day(s):

- ☐ Use Project default times for these days.
- ☐ Set days to nonworking time.
- ☒ Set day(s) to these specific working times:

| | From | To |
|---|---------|----------|
| 1 | 8:00 SA | 12:00 CH |
| 2 | 1:00 CH | 5:00 CH |
| | | |
| | | |
| | | |

Help OK Cancel

- Add an exception in the **Standard** calendar called **Recovery**. This exception should make **December 26th to 31st** non-working days.

Exceptions Work Weeks

| | Name | Start | Finish |
|---|----------|------------|------------|
| 1 | Recovery | 26/12/2022 | 31/12/2022 |

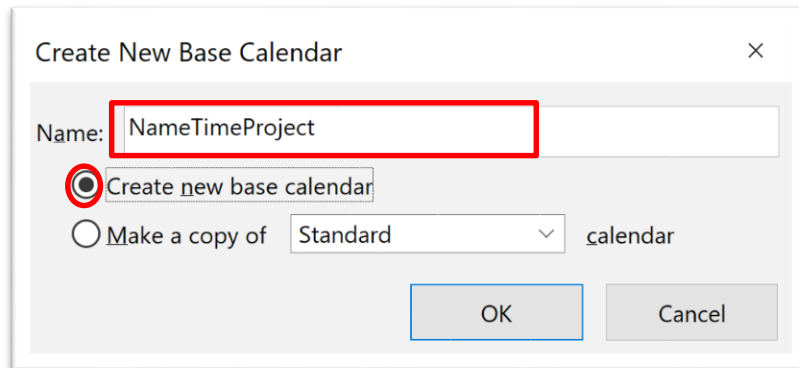
- Display the Project Information.

Exercise 5. Create the private Time for a project

Open project file Ex7 (Module 1), Use the **Project Information** dialog box to:

- Schedule this project to begin on **January 1st** of next year.
- Create the new Time Work for your project. [NameTimeProject]

{Name: Your Name - Ex: MinhTimeProject}



NameTimeProject have **Work Time** form Monday to Saturday as the following:

- Monday to Friday: 7:30-11:30, 13:30-16:30
- Saturday: 7:30-11:30

NameTimeProject have two important religious holidays when they **don't work (Exception)**

- Calendar 1 - on the last Monday (off 13:00-16:00) of every month. ****
- Holiday Day - on April 30th, and May 1st in this year.

- Assign the NameTimeProject to your Project and display the Project Information.

Exercise 6. Your project

- Create your plan from Monday to Sunday. It will list all of your activities, your time you spend and resources joining in each task.
- Create a new calendar called **Student** based on the **Standard** calendar.
- Change the **[Default]** work week so that the hours match to your calendar everyday
- Using Note function in MP 2010 to take note for important tasks in your plan.

MODULE 3: Working with Tasks

Exercise 1. Changing Working Time (Start Date 1/11/2021)

- Santa's workshop has two machines for making toys for boys and girls - the first job of the year is to prepare them for work.

| ID | TASK NAME | PREDECESSOR | DURATION |
|----|--------------------|-------------|----------|
| 1 | clean machine | | 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 1/11/2021)

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

| ID | TASK NAME | PREDECESSOR | DURATION |
|----|---------------------|-------------|-------------------|
| 1 | Visit estate agents | | 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 | <i>Don't know</i> |
| 6 | offer a 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: 11/05/2022)

| 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:

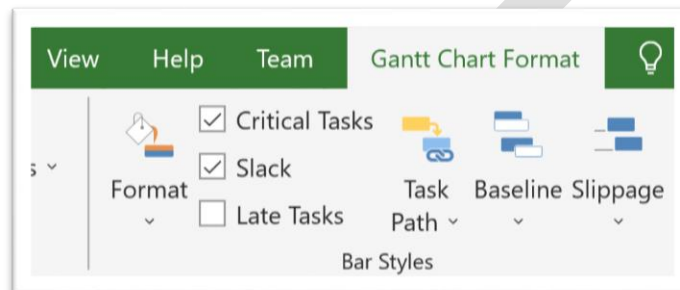
| No | Milestone | At End Of phrases |
|----|---------------------------------|------------------------------|
| 1 | Planning Completed | <i>Planning</i> |
| 2 | Site Works Completed | <i>Site works</i> |
| 3 | Building Construction Completed | <i>Building Construction</i> |
| 4 | Fit Out Completed |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

Creating Dependencies in Task Entry

| ID | TASK NAME | Duration | Dependencies |
|----|--|----------|----------------------------------|
| 1 | Planning | ????? | |
| 2 | Creating architectural plans | 3 wks | |
| 3 | Submit plans for approval | 1 mon | 2 |
| 4 | Order materials | 8 days | 3 |
| 5 | Planning Completed | 0 | 2,3,4 |
| 6 | Site works | | |
| 7 | Erect fencing | 3 days | 5 |
| 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 | | |
| 14 | Pour foundations | 4 days | 12 |
| 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 | 18SS |
| 20 | Building Construction Completed | 0 | 14,15,16,17,18,19 |
| 21 | Fit Out | | |
| 22 | Fit all windows and doors | 2 wks | 20 |
| 23 | Install electrical cabling | 1 wk | 20 |
| 24 | Install electrical fittings and fixtures | 2 wks | 23 |
| 25 | Install all plumbing | 2 wks | 20 |
| 26 | Install plumbing fixtures and fittings | 1 wk | 25 |
| 27 | Lay astro turf | 1 wk | 20 |
| 28 | Erect handrails and fencing | 2 wks | 20 |
| 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 | | |
| 35 | Test roof mechanism | 1 wk | 33 |

| | | | |
|----|------------------------------|--------|----------------------|
| 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**

MODULE 4: Assigning the Resource for a Project

Capture the Project Information before and after assigning the resource.

Exercise 1. Entering work resource

- Open the Exercise 1 (Module 3)
- Tab View → Resource Sheet
- Add the resource for this project below: Type Work (person)

| STT | Name | Initials | Groups | Max. Units | Std. Rate |
|-----|-----------------|----------|------------|------------|-----------|
| 1. | David | Dav | Consultant | 100% | 8 |
| 2. | Brian | Bri | Staff | 200% | 7 |
| 3. | Mary | Mar | Staff | 100% | 7 |
| 4. | John | Joh | Staff | 100% | 7 |
| 5. | Worker 1: Liam | W1 | Worker | 300% | 6 |
| 6. | Worker 2: Chang | W2 | Worker | 200% | 6 |

- Assign the resource for each task

Tab Task → Gantt Chart → Select the task that you want to assign the resource

| ID | TASK NAME | RESOURCE |
|----|--------------------|-----------------|
| 1 | clean machine | Worker 1, David |
| 2 | load raw materials | Worker 2 |
| 3 | prime machine | Mary |
| 4 | Test run | Brian |
| 5 | clean machine | Worker 1 |
| 6 | load raw materials | Worker 2 |
| 7 | prime machine | John |
| 8 | Test run | David |

Exercise 2. Entering work resource

- Open the Exercise 2 (Module 3)
- Tab View → Resource Sheet
- Add the resource for this project below: Type Material

| STT | Name | Type | Materials | Initials | Groups | Std. Rate |
|-----|-----------------|----------|-----------|----------|----------|-----------|
| 1. | MDF | Material | Sheet | Md | Material | 20 |
| 2. | Flooring | Material | Pack | Fl | Material | 80 |
| 3. | Purple Material | Material | Roll | Pu | Material | 30 |
| 4. | Orange Material | Material | Roll | Or | Material | 120 |

- Assign the resource for each task

Tab Task → Gantt Chart → Select the task that you want to assign the resource

Select Tab Resource → Assign Resource

The information of resource that will assign for the task

| ID | TASK NAME | RESOURCE |
|----|---------------------|----------|
| 1 | Visit estate agents | MDF [2] |

| | | |
|---|--------------------|-----------------------------------|
| 2 | View properties | Flooring [2] |
| 3 | Decide what to buy | Purple Material [1] |
| 4 | Make offer | Flooring [1], Purple Material [1] |
| 5 | Wait for decision | Flooring [1], Orange Material [1] |
| 6 | offer a accepted | Orange Material [2] |

Exercise 3. Entering work resource

- Create the project bellowing:

| ID | TASK NAME | PREDECESSOR | DURATION |
|----|-----------------------|-------------|----------|
| 1 | Planning | - | 1 wk |
| 2 | Requirement documents | 1 | 2 wks |
| 3 | Sign off | 2 | 1 day |
| 4 | Development | 3 | 10 wks |
| 5 | Testing | 4 | 4 wks |
| 6 | Implementation | 5 | 2 wks |
| 7 | Review | 6 | 1 wk |

- Add the resource for this project below: Type Work/Material

| STT | Name | Type | Materials | Initials | Groups | Std. Rate |
|-----|-------------------|----------|-----------|----------|----------|-----------|
| 1. | PM | Work | | PM | Sponsor | 10 |
| 2. | Designer | Work | | Ds | Staff | 6 |
| 3. | Developer | Work | | Dp | Staff | 8 |
| 4. | Tester | Work | | Tt | Staff | 6 |
| 5. | Maintainer | Work | | M | Staff | 5 |
| 6. | Operating System | Material | Unit | OS | Material | 120 |
| 7. | Internet Provider | Material | Unit | ISP | Material | 100 |
| 8. | Cable | Material | M | Cb | Material | 1 |
| 9. | Visual Studio | Material | Unit | VS | Material | 20 |

- Assign the resource for each task

| ID | TASK NAME | Work | Material |
|----|-----------------------|----------------|---|
| 1 | Planning | PM | |
| 2 | Requirement documents | PM, Designer | |
| 3 | Sign off | PM | |
| 4 | Development | Developer | Operating System[1] , Visual Studio [1] |
| 5 | Testing | Tester | |
| 6 | Implementation | Maintainer | Operating System , Visual Studio, Cable [100] |
| 7 | Review | PM, Maintainer | |

Exercise 4. Entering work resource

- Capture the Project Information before and after assigning the the source.**
- Open the Exercise 3 (Module 3)
- Tab View → Resource Sheet → Resource Views
- Establish the resource that type is work (default) for the project below:

| STT | Name | Initials | Groups | Max. Units | Std. Rate |
|-----|------|----------|--------|------------|-----------|
|-----|------|----------|--------|------------|-----------|

| | | | | | |
|-----|---------------------|------|------------|--------|----|
| 1. | Architect | Arc | Consultant | 100% | 9 |
| 2. | Draftsperson | Dft | Staff | 200% | 7 |
| 3. | Building Clerk | BC | Staff | 100% | 8 |
| 4. | Supervisor | Sup | Staff | 100% | 12 |
| 5. | Rigger | Rig | Wages | 600% | 5 |
| 6. | Boilermaker | BM | Wages | 600% | 5 |
| 7. | Welder | Weld | Wages | 500% | 6 |
| 8. | Carpenter | Car | Wages | 800% | 7 |
| 9. | Painter | Ptr | Wages | 500% | 6 |
| 10. | Labourer | Lab | Wages | 1,000% | 6 |
| 11. | Driver | Drv | Wages | 300% | 8 |
| 12. | No Barrier Fencing | NBF | Contractor | 100% | 3 |
| 13. | Rock Solid Concrete | RSC | Contractor | 100% | 4 |
| 14. | Listen Ear Audio | LEA | Contractor | 100% | 5 |
| 15. | In Focus Video | IFV | Contractor | 100% | 5 |
| 16. | Pure Grass Turf | PGT | Contractor | 100% | 5 |
| 17. | Building Inspector | BI | Government | 100% | 5 |
| 18. | High Jib Crane | HJC | Equipment | 100% | 7 |
| 19. | Grader | Grd | Equipment | 200% | 6 |
| 20. | Air Compressor | AC | Equipment | 100% | 7 |
| 21. | Utility | Ute | Equipment | 200% | 5 |
| 22. | Electrician | Cap | Staff | 400% | 7 |
| 23. | Plumber | Plu | Staff | 400% | 5 |

- Establish the resource that type is material for the project below at the of Resource list above:

| STT | Name | Type | Materials | Initials | Groups | Std. Rate |
|-----|------------|----------|--------------|----------|----------|-----------|
| 24. | Astro Turf | Material | Square Matre | Grass | Material | 12 |
| 25. | Paint | Material | Ultre | Paint | Ute | 20 |

- Assign the resource for each task in the project

| ID | TASK NAME | RESOURCE |
|----|---------------------------------|---|
| 1 | Planning | |
| 2 | Creating architectural plans | Architect, Draftsperson (200%), Building Clerk (25%) |
| 3 | Submit plans for approval | Architect |
| 4 | Order materials | Draftsperson, Building Clerk |
| 5 | Planning Completed | |
| 6 | Site works | |
| 7 | Erect fencing | No Barrier Fencing |
| 8 | Erect site building | Carpenter (400%), Supervisor, Labourer |
| 9 | Clear and level site | Supervisor, Grader(200%), Driver(200%) |
| 10 | Prepare drainage infrastructure | Supervisor(50%), Plumber(200%) |
| 11 | Prepare cabling infrastructure | Supervisor(50%), Electrician(300%) |
| 12 | Site works Completed | |
| 13 | Building Construction | |
| 14 | Pour foundations | Rock Solid Concrete |
| 15 | Erect steelwork | Supervisor [50%], Rigger [600%], Boilermaker [600%], Welder [500%], Labourer [600%], Driver [200%], High Jib Crane, Utility |

| | | |
|----|--|--|
| 16 | Erect wall | Supervisor [50%], Carpenter [700%], Labourer [400%], Driver, Grader, Air Compressor, Electrician [75%], Plumber [25%] |
| 17 | Install roofing superstructure | Supervisor [50%], Rigger [500%], Boilermaker [500%], Welder [300%], Labourer [500%], Driver [200%], High Jib Crane, Utility, Air Compressor, Plumber [50%] |
| 18 | Install roofing retracting mechanism | Supervisor [50%], Welder, Boilermaker [200%], Rigger [200%], Electrician [200%], Driver, High Jib Crane |
| 19 | Erect seating tiers | Supervisor [50%], Carpenter [800%], Welder [200%], Boilermaker [200%], Labourer [500%], Driver, Utility, Air Compressor |
| 20 | Building Construction Completed | |
| 21 | Fit Out | |
| 22 | Fit all windows and doors | Carpenter [500%], Labourer [200%] |
| 23 | Install electrical cabling | Electrician [300%], Labourer [200%] |
| 24 | Install electrical fittings and fixtures | Electrician [300%] |
| 25 | Install all plumbing | Plumber [200%], Labourer [200%] |
| 26 | Install plumbing fixtures and fittings | Plumber [200%] |
| 27 | Lay astro turf | Pure Grass Turf |
| 28 | Erect handrails and fencing | Welder [400%], Boilermaker [200%] |
| 29 | Paint rooms, fixtures, fittings, etc. | Painter [500%] |
| 30 | Install PA system | Listen Ear Audio |
| 31 | Install video imaging equipment | In Focus Video |
| 32 | Fit out control room | Electrician [200%], Listen Ear Audio, In Focus Video |
| 33 | Fit out Completed | |
| 34 | Commissioning | |
| 35 | Test roof mechanism | Supervisor, Electrician [200%], Rigger |
| 36 | Test PA system | Listen Ear Audio |
| 37 | Test video imaging equipment | In Focus Video |
| 38 | Test control room equipment | Supervisor, Listen Ear Audio [20%], In Focus Video [20%], Architect, Electrician [200%] |
| 39 | Obtain official occupancy | Architect, Building Clerk, Supervisor |
| 40 | Obtain safety certification | Supervisor |
| 41 | Official opening | Supervisor[200%] |
| 42 | Commissioning Completed | |

Exercise 5.

Capture the Project Information before and after assigning the resource.

Creating the following tasks (Project Start Date 6/12/2021)

- Establish working time: **MSSV_Time**

1. Working time: Mon – Fri: 8AM – 11AM, Sat: 11AM-9PM

2. Nonworking time: Sun
3. Exception: Nonworking time: 24/12/2021, 1/1/2022

| STT | Name | Duration | Dependencies |
|-----|------------------------------------|----------|--------------------|
| 1. | The Engagement | 1 day | |
| 2. | The Venue - Confirm Dates | 4 wks | 1 |
| 3. | The Photographer | 3 wks | 2 |
| 4. | The Cars | 4 wks | 2 |
| 5. | The DJ | 1 wk | 2 |
| 6. | The Dress - Find the Perfect Dress | 3 wks | 2 |
| 7. | The Venue - Confirm Menu | 4 wks | 2 |
| 8. | The Venue - Pay Deposit | 2 hrs | 7 |
| 9. | The Dress - Pay for Dress | 1 hr | 6 |
| 10. | Invitations - Confirm Design | 2 wks | 6 |
| 11. | The Flowers | 2 wks | 6 |
| 12. | Invitations - Confirm Numbers | 1 wk | 10 |
| 13. | Invitations - Invites Produced | 2 mons | 12 |
| 14. | Review progress | 4 wks | 3,4,5,8,9,11,12,13 |
| 15. | Invitations - Send Out | 1 wk | 13 |
| 16. | The Dress - First Fitting | 2 hrs | 9 |
| 17. | Invitations - Review RSVP's | 1 wk | 15 |
| 18. | The Venue - Confirm Numbers | 2 hrs | 17 |
| 19. | The Venue - Confirm Timings | 2 hrs | 18 |
| 20. | The Venue - Pay Balance | 1 hr | 19 |
| 21. | The Dress- Final Fitting | 2hr | 20 |

- Create a milestone task at the end: The Big day (P) (Dependencies: 19,21)
- Creating the summary tasks :
 - Before 6 month to go (Task 2,3,4,5,6,7)
 - 6 month to go (Task 8,9,10,11)
 - 5 month to go (Task 12,13)
 - 4 month to go (Task 14)
 - 3 month to go (Task 15)
 - 2 month to go (Task 16,17)
 - 1 month to go (Task 18,19,20,21)
- Establish the resource table:

| STT | Name | Type | Initials | Groups | Max. Units | Std. Rate |
|-----|------|------|----------|--------|------------|-----------|
|-----|------|------|----------|--------|------------|-----------|

| | | | | | | |
|----|-------------|----------|----------|--|-------|-----------|
| 1. | Venue | Material | Initials | | | £3,000.00 |
| 2. | Photographs | Material | V | | | £1,000.00 |
| 3. | Flowers | Material | P | | | £900.00 |
| 4. | Cars | Material | F | | | £500.00 |
| 5. | DJ | Material | C | | | £250.00 |
| 6. | Guest | Work | D | | 8000% | £25/1hr |

- Assign the resource for each task in the project

| STT | Name | Resource |
|-----|------------------------------------|----------------|
| 1. | | |
| 2. | The Engagement | |
| 3. | The Venue - Confirm Dates | Venue[1] |
| 4. | The Photographer | Photographs[1] |
| 5. | The Cars | Cars[1] |
| 6. | The DJ | DJ[1] |
| 7. | The Dress - Find the Perfect Dress | |
| 8. | The Venue - Confirm Menu | |
| 9. | The Venue - Pay Deposit | |
| 10. | The Dress - Pay for Dress | |
| 11. | Invitations - Confirm Design | |
| 12. | The Flowers | Flowers[1] |
| 13. | Invitations - Confirm Numbers | |
| 14. | Invitations - Invites Produced | |
| 15. | Review progress | |
| 16. | Invitations - Send Out | |
| 17. | The Dress - First Fitting | |
| 18. | Invitations - Review RSVP's | |
| 19. | The Venue - Confirm Numbers | |
| 20. | The Venue - Confirm Timings | |
| 21. | The Venue - Pay Balance | Guests[7,000%] |
| 22. | The Dress- Final Fitting | |

MODULE 5: COST, CONSTRAINS, DEADLINE for TASKs

Resource: work, material, cost

Work: [person] – max, std rate, ovt rate, cost/use

Material: - unit (kg, m, unit, GB,...), Std rate, Ex: 20\$/1kg, 120\$/1 hard disk, cost/use

Cost: [text] – not value

Assigning to the tasks (set value)

Total Cost/taks₁ = work + material + cost + fixed cost

Total Cost/ project = Total Cost/taks₁ + Total Cost/taks₂ +....

Actual Cost= current/time

Variance=

%completed (work, duration)

Update Status of Project: time

Constraints: FS(As soon as possible: default????)

Deadline: NA

Exercise 1. Entering Cost

- Open the Exercise 1 (Module 4) [Cost: \$1.984]
- Tab View → Resource Sheet
- Add the resource for this project below: Type Cost (Not set value, Rate)

| STT | Name | Type |
|-----|---------------|------|
| 11. | Cost Tax | Cost |
| 12. | Logistic Cost | Cost |

Assign Cost for task **Ready for preproduction task (Cost Task: 10\$, Logistic Cost: 10\$)**

- Cost of project?
- Update Project after 5 days? Cost of Project?

Exercise 2.

- Exercise 2 (Module 4) Cost: ?
- Tab View → Resource Sheet
- Add the resource for this project below: Type Cost (Not set value, Rate)

| STT | Name | Type |
|-----|------|------|
|-----|------|------|

| | | |
|----|---------------|------|
| 5. | Cost Tax | Cost |
| 6. | Logistic Cost | Cost |
| 7. | OT Cost | Cost |
| 8. | Bonus | Cost |
| 9. | Punishment | Cost |

- Assign Cost for these tasks:

| ID | TASK NAME | RESOURCE |
|----|---------------------|--|
| 1 | Visit estate agents | MDF [2], OT Cost[50] |
| 2 | View properties | Flooring [2], Cost Task[3] |
| 3 | Decide what to buy | Purple Material [1], Bonus[12] |
| 4 | Make offer | Flooring [1], Purple Material [1], OT Cost[8], Punish[5] |
| 5 | Wait for decision | Flooring [1], Orange Material [1], Logistic Cost[75] |
| 6 | offer a accepted | Orange Material [2], Cost Tax [4], Bonus[10] |

- Cost of project?
- Update Project after 3 days? Cost of Project?

Exercise 3.

- Exercise 3 (Module 4) Cost: ?
- Tab View → Resource Sheet
- Add the resource for this project below: Type Cost (Not set value, Rate)

| STT | Name | Type |
|-----|---------------|------|
| 10. | Tax | Cost |
| 11. | Upgrade Fee | Cost |
| 12. | Maintain Fee | Cost |
| 13. | Bonus | Cost |
| 14. | Part Time Fee | Cost |

- Assign the resource for each task

| ID | TASK NAME | Resource |
|----|-----------------------|--|
| 1 | Planning | PM, Tax[4] |
| 2 | Requirement documents | PM, Designer, Part Time Fee[10] |
| 3 | Sign off | PM |
| 4 | Development | Developer, Operating System[1] , Visual Studio [1], Upgrade Fee[21] |
| 5 | Testing | Tester, Part Time Fee[10], Bonus[18] |
| 6 | Implementation | Maintainer, Operating System , Visual Studio, Cable [100], Maintain Fee[18], Bonus[23] |
| 7 | Review | PM, Maintainer |

- Cost of project?
- Update Project after 2 weeks? Cost of Project?

Exercise 4.

- Exercise 4 (Module 4) Cost: ?
- Tab View → Resource Sheet
- Add the resource for this project below: Type Cost (Not set value, Rate)

| STT | Name | Type |
|-----|------|------|
|-----|------|------|

| | | |
|-----|---------------|------|
| 26. | Tax | Cost |
| 27. | Bonus | Cost |
| 28. | Part Time Fee | Cost |
| 29. | Logictis Cost | Cost |

- Assign the resource for each task

| ID | TASK NAME | RESOURCE |
|----|---------------------------------|---------------------------------|
| 5 | Planning Completed | Part Time Fee[150], Bonus[70] |
| 12 | Site works Completed | Logictis Cost[240] |
| 20 | Building Construction Completed | Logictis Cost[1004], Bonus[210] |
| 33 | Fit out Completed | Tax[50] |
| 42 | Commissioning Completed | Bonus[180] |

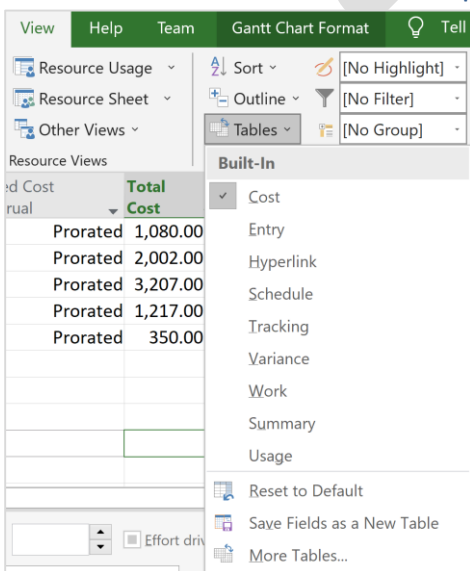
- Cost of project?
- Update Project after 1 month? Cost of Project?
- Update Project after 4,5 month? Cost of Project?
- Update Project after 6 month? Cost of Project?

MODULE 6: Hiện thị dự án theo một số yêu cầu- Report

- MS Project cho phép hiển thị các task trong dự với các cách khác nhau như:

| | |
|------------------------|---|
| Calendar | Lịch hàng tháng chỉ ra các công việc và khả năng hoàn thành nó. |
| Gantt Chart | Diễn tả các công việc và các thông tin có liên quan, một biểu đồ (biểu đồ ngang) thể hiện các công việc và thời gian hoàn thành chúng. |
| Network Diagram | Thể hiện dưới dạng lưới các công tác (sơ đồ mạng) và sự phụ thuộc giữa chúng. Dùng khung nhìn này để có một cái nhìn bao quát về các công việc. |
| Task Usage | Thể hiện danh sách các công việc đã được gán tài nguyên. Dùng khung nhìn này để thấy nguồn nguồn lực nào đã được gán cho một công việc cụ thể |
| Tracking Gantt | Thể hiện danh sách của công việc và thông tin có liên quan. Dùng khung nhìn này để theo dõi tiến trình của dự án. |
| Resource Graph | Thể hiện biểu đồ phân phối tài nguyên. Dùng khung nhìn này để thể hiện thông tin về một nguồn lực dưới các tiêu chí khác nhau. |
| Resource Sheet | Danh sách nguồn lực và thông tin liên quan. Dùng khung nhìn này để nhập và hiệu chỉnh các thông tin về tài nguyên. |

- Tab View: Hiển thị và cho phép lọc theo các tham số khác nhau



Thể hiện các giá trị cần lọc

Hiển thị dự án theo chi phí

Hiển thị dự án toàn bộ dự án

Hiển thị dự án theo lịch thực hiện

Theo dõi toàn dự án

Hiển thị dự án theo tổng các work thực hiện

- So sánh các giá trị Cost, Baseline, Variance, Actual

Work: Thời gian thực hiện theo các tham số hiện tại.

Baseline: Thời gian thực hiện công việc theo kế hoạch.

Variance: Khoảng thời gian thay đổi giữa thực tế và kế hoạch.

Actual: Thời gian thực tế đã thực hiện được theo các tham số hiện tại.

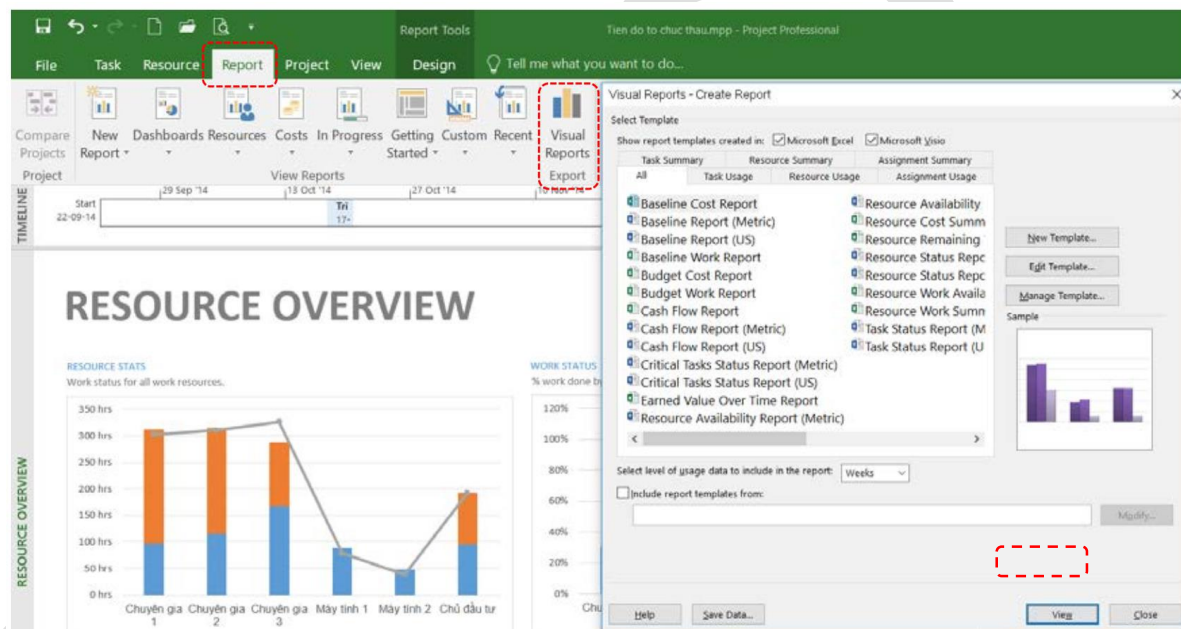
Remaining: Thời gian thực tế còn lại.

%W. Coml: Số phần trăm công việc đã thực hiện.

- Xuất các báo cáo (Report) cho dự án

1. Báo cáo theo đồ thị:

Tab Report → Visual Reports



2. Báo cáo cơ bản dạng số liệu

Tab Report → View Group

To báo cáo cho các bài tp trong Module 5:

1. Cho toàn b DA - BÁO CÁO TNG QUAN (Project Overview) -> .pdf
2. Cho chi phí - BÁO CÁO CHI PHÍ (Task Cost Overview) .pdf
3. Cho tài nguyên - BÁO CÁO V TÀI NGUYÊN Resource Overview) .pdf

| Resource | Report | Project | View | Help | Team | Gantt Chart Format | Tell me what you want to do |
|--------------------|------------|------------|----------------|-----------------|-----------------|--------------------|-----------------------------|
| | Dashboards | Resources | Costs | In Progress | Getting Started | Custom Recent | Visual Reports |
| | | | | | | | Export |
| Task Name | Start | Finish | Baseline Start | Baseline Finish | Start Var. | Finish Var. | Add New |
| Thu thập yêu cầu | 18/10/2021 | 25/10/2021 | NA | NA | 0 days | 0 days | |
| Phân tích thiết kế | 26/10/2021 | 16/11/2021 | NA | NA | 0 days | 0 days | |
| Viết chương trình | 05/11/2021 | 25/11/2021 | NA | NA | 0 days | 0 days | |
| Kiểm thử | 26/11/2021 | 03/12/2021 | NA | NA | 0 days | 0 days | |
| Triển khai | 06/12/2021 | 06/12/2021 | NA | NA | 0 days | 0 days | |

| Task Name | Duration | |
|-------------------|----------|--|
| Khảo sát | 2 days | Bùi Hoàng Quyên, Thuế[20.00 đ] |
| Phân tích | 4 days | Framework[1], Lê Lan Phương[200%], Chi phí đi lại[5.00 đ] |
| Thiết kế | 7 days | OS[2], Trần Ngọc Hà |
| Xây dựng | 0.5 mons | Trần Ngọc Hà, Hardisk[0.5] |
| Kiểm thử | 1 wk | Hoàng Mạnh Quân (PM), Thuế[10.00 đ] |
| Chuyển Giao | 4 days | Lê Hoàng Minh (TV)[50%], Mai Hà Linh, Chi phí công tác[100.00 đ] |
| Hướng dẫn sử dụng | 3 days | Phạm Minh Vương (TV), Chi phí đi lại[10.00 đ] |

| Resource Name | Type | Material Label | Initials | Group | Max. Units | Std. Rate | Ovt. Rate | Cost/Use |
|----------------------|----------|----------------|----------|-------|------------|------------|-----------|----------|
| Hoàng Mạnh Quân (PM) | Work | | H | | 100% | 10.00 đ/hr | 0.00 đ/hr | 20.00 đ |
| Lê Hoàng Minh (TV) | Work | | L | | 50% | 20.00 đ/hr | 0.00 đ/hr | 10.00 đ |
| Phạm Minh Vương (TV) | Work | | P | | 200% | 15.00 đ/hr | 0.00 đ/hr | 30.00 đ |
| Lê Lan Phương | Work | | L | | 100% | 15.00 đ/hr | 0.00 đ/hr | 10.00 đ |
| Hoàng Lê Minh | Work | | H | | 100% | 10.00 đ/hr | 0.00 đ/hr | 0.00 đ |
| Mai Hà Linh | Work | | M | | 100% | 15.00 đ/hr | 0.00 đ/hr | 10.00 đ |
| Trần Ngọc Hà | Work | | T | | 200% | 15.00 đ/hr | 0.00 đ/hr | 10.00 đ |
| Bùi Hoàng Quyên | Work | | B | | 100% | 15.00 đ/hr | 0.00 đ/hr | 10.00 đ |
| OS | Material | | O | | | 250.00 đ | | 0.00 đ |

| | | | | | | | |
|------------------|----------|---|--|--|----------|--|--------|
| Hardisk | Material | H | | | 120.00 đ | | 0.00 đ |
| USB | Material | U | | | 1.00 đ | | 0.00 đ |
| Framework | Material | F | | | 80.00 đ | | 2.00 đ |
| Chi phí đi lại | Cost | C | | | | | |
| Chi phí công tác | Cost | C | | | | | |
| Thuế | Cost | T | | | | | |