FanProject

Excel Project Management Model

Manual

Version: The First Version

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Chapter 1 Preface

In our experience of working in corporates, every day there are a lot of projects or tasks assigned to employees. Normally, the boss only asks staff to complete the work as soon as possible instead of telling staff the exact due date, how to do it or which resources are needed. In addition, in some companies, they do not purchase professional project management software. Instead, they only use free software or Excel worksheet.

There is a limit if using free software or basic functions in Excel for managing the project. It has fewer functions and may not let you get a beautiful Gantt chart.

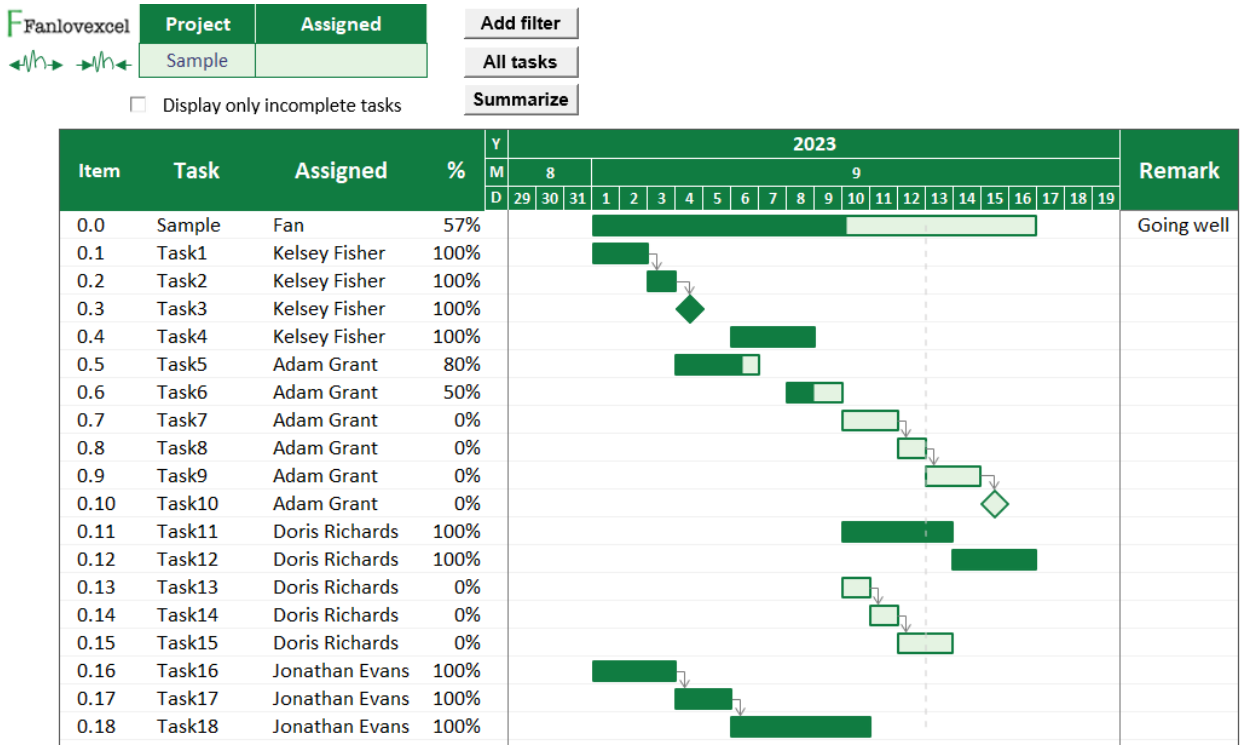
Therefore, we have been trying to develop an outstanding project management model in excel like a pro. In recent years, there have been a lot of new excel functions and features released, e.g., dynamic array function and power query. We found that right now we do not need to use a great amount of VBA macros to design excel models anymore.

In 2023, we finally finish our first version of this project management model, FanProject. We are glad to say that it is very close to being like professional software. The most important part is that it is Excel, our best friend at work.

Hope you have great experience in using FanProject. Please give any of your feedback to us. Let us know how can we improve our model in the future.

Chapter 2 Starting a New Project

When opening the file of our product, FanProject.xlsm, the first sheet showing up is the sheet(“**Gantt chart**”). In this sheet, you will see our sample data and its Gantt chart, as in the photo below.

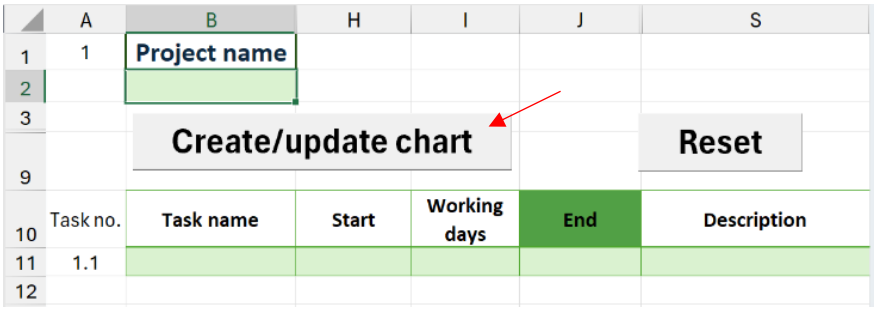


In this workbook, there are other sheets, including “**For User**”, “**Sample**”, “**Project_1~X**” and “**data_transition**”. The sheet(“**For User**”) is a blank sheet for users’s own use The sheet(“**Sample**”) is the data table of our sample project. The sheet(“**Project_1~X**”) are the data tables for users to plan their projects. And the last sheet(“**data_transition**”) kept unhide is just for the performance purpose. Users don’t need to edit it.

Back to our Gantt chart. Let me hide the columns ‘**Assigned**’ and ‘**%**’, then show you how to start a new project easily.

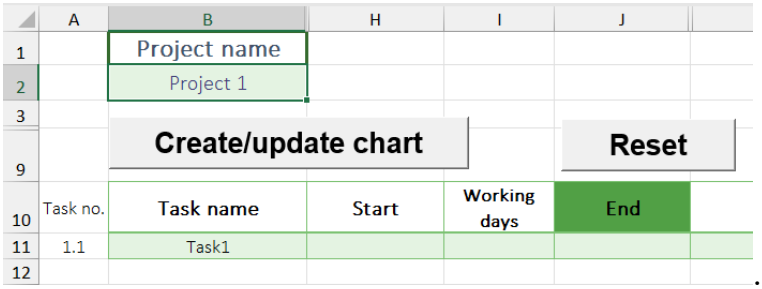
PS *I will show you how to adjust the headers of Gantt chart in Chapter 9*.

Go to sheet("**Project1**"), then you will see the data table, as in the photo below.

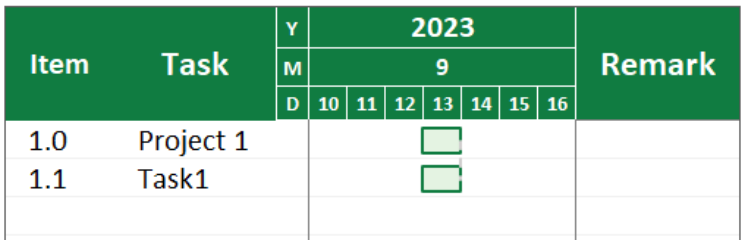


In this sheet, there are 2 command buttons showing up by default, which are for users to create/update chart or reset the data. And there is one command button Catch up on progress hiding by default, which we will introduce in Chapter 6.

Before creating the Gantt chart, you need to input your project name in cell B2 and at least one task name in cell B11. Let's leave the other fields blank and create our first Gantt chart.



Click Create/update chart button. Boom, your first Gantt chart shows up.



You can see there are two little bars in the chart. One is the summarized schedule of the project, which is **Project 1** in this case. The other one is the schedule of the task, which is **Task1**.

Both two bars are in the same position, today's date, and with the same width, a day. That's because we've set the default value of the start date as today's date (Sep. 13th is the date I wrote this page) and set the default value of working days as a day.

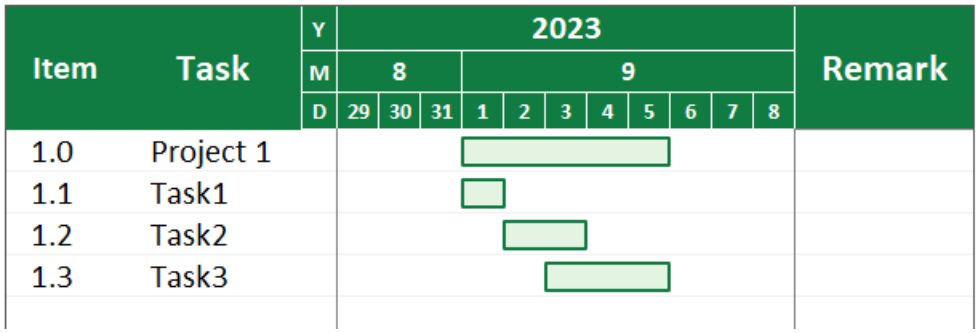
Until now, maybe you are still a bit confused about what a Gantt chart really does, so let me take another example for you.

This time, let's input 3 tasks for **Project 1** and enter their start date and working days as well.

PS The field '**End**' with dark green is designed to use formular, so please don't try to edit this column unless you know what its influence is. So do other fields with dark green color.

	A	B	H	I	J
1		Project name			
2		Project 1			
3					
9		Create/update chart			Reset
10	Task no.	Task name	Start	Working days	End
11	1.1	Task1	2023/09/01	1	2023/09/01
12	1.2	Task2	2023/09/02	2	2023/09/03
13	1.3	Task3	2023/09/03	3	2023/09/05
14					

Then click Create/update chart. A more meaningful Gantt chart shows up.



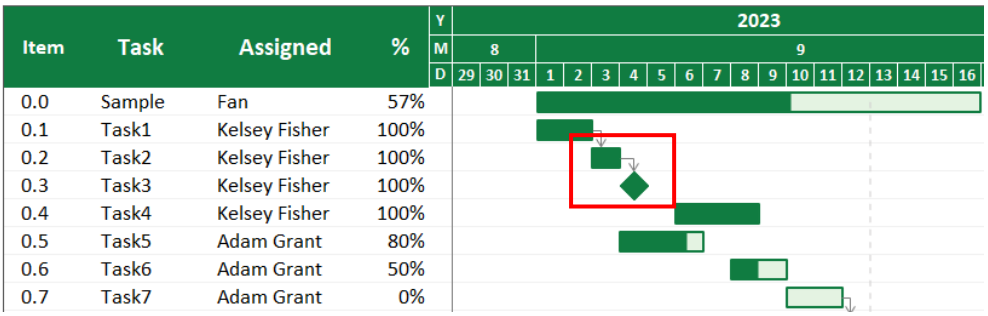
Now you might understand better that what is the summarized schedule of **Project 1** and what does the width of the bar mean in the Gantt chart.

The width of the bars from **Task1~3** means how much time you will take to complete these tasks, which is also called duration. And the width of the bar from **Project 1** means how much time you will take to complete this project, which is 5 days in this case.

Before we introduce the next important part, **Progress bar**, let's go deeper into the topic of task type.

Chapter 3 Introduction to Task Type

In our sample Gantt chart, you can see there are two types of shapes, as in the photo below.



Item	Task	Assigned	%
0.0	Sample	Fan	57%
0.1	Task1	Kelsey Fisher	100%
0.2	Task2	Kelsey Fisher	100%
0.3	Task3	Kelsey Fisher	100%
0.4	Task4	Kelsey Fisher	100%
0.5	Task5	Adam Grant	80%
0.6	Task6	Adam Grant	50%
0.7	Task7	Adam Grant	0%

Let me introduce what's the difference between them. We have two task types in our model, which includes,

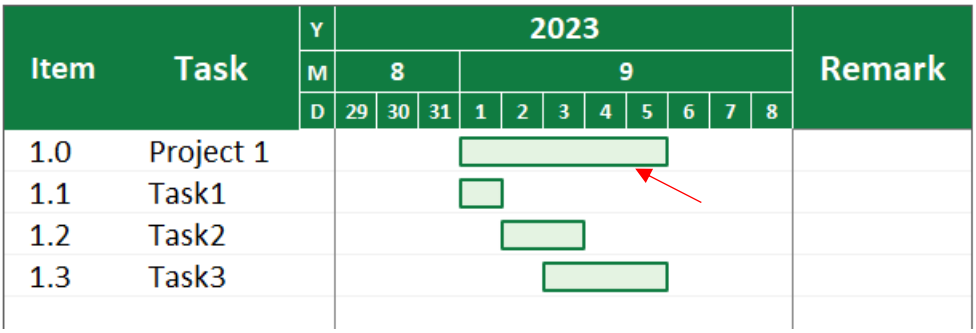
1.Task :

This type is for normal tasks that you would take among 1 day or days to complete, e.g. writing a contract, designing a product, or manufacturing a product in a factory.

2.Milestones :

This type is for events planned to be a significant point in project, e.g. customer signing a contract, delivery of material, or a kick-off meeting. Normally, we fix the width of the shape of this type to one day. Therefore, users don't need to enter value in the field '**Working days**'.

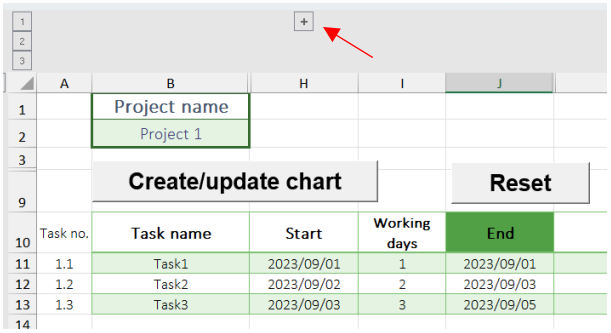
In a professional Gantt chart software, there is another type for describing the summarized schedule by using the shape like . However, we only use the shape of the bar, as in the photo below.



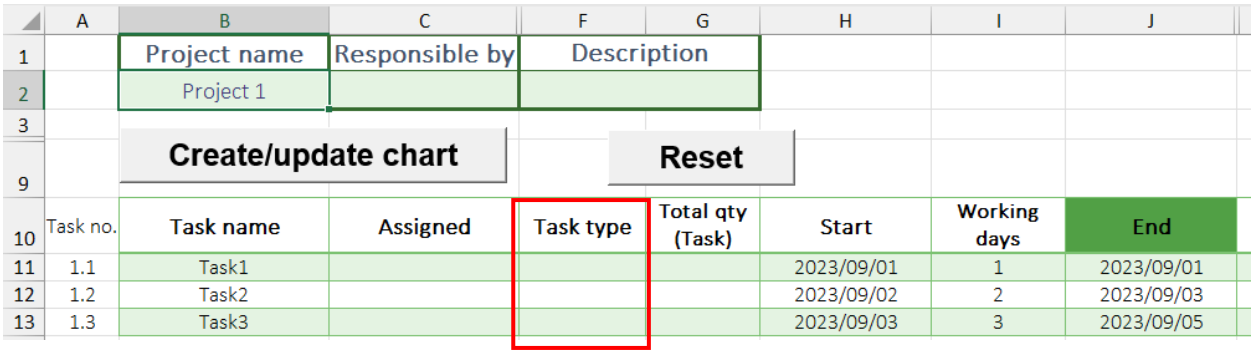
Item	Task	Remark
1.0	Project 1	
1.1	Task1	
1.2	Task2	
1.3	Task3	

So how to change the task type in our model?
By default, we group the column '**Task type**' as not to make users feel too much information when they first start learning project planning.

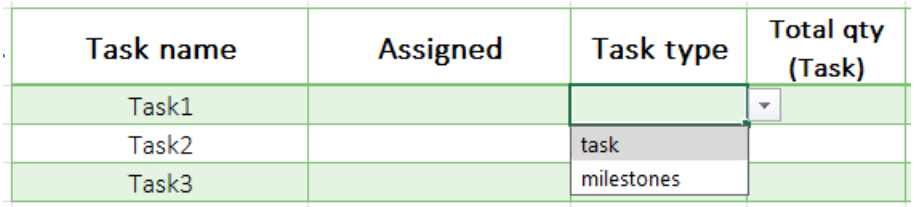
Let's open the grouping columns by clicking the icon, as in the photo below.



You will see the columns C, F, and G showing up, we first focus on the field '**Task type**' in the data table.



In this field, we already prepared a dropdown list for users to select, including task and milestones, as in the photo below.

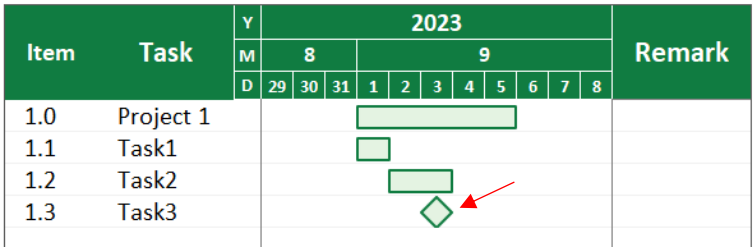


By default, the task type is 'task'. So it is not necessary to edit this field when users need the task type . However, we still suggest users shall enter 'task' in the field to make it clear. On the other hand, users must have to select 'milestones' if they need the milestones type.

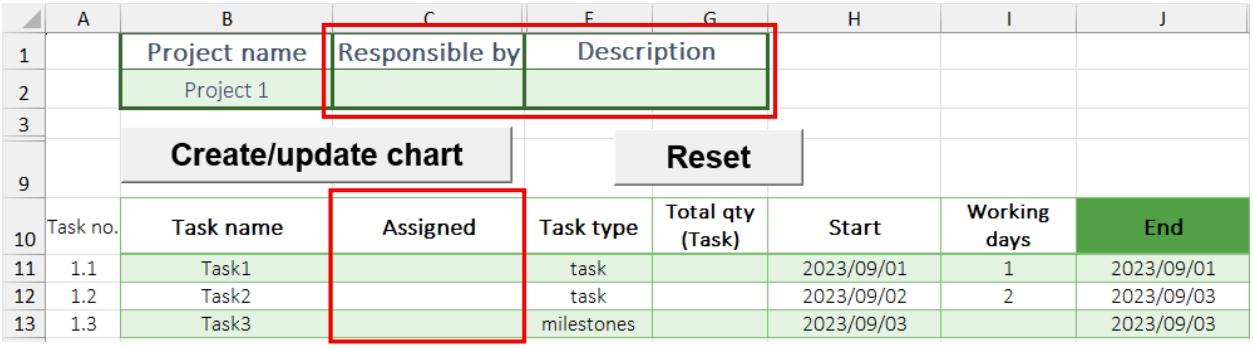
Let's select 'task' for **Task1** and **Task2** and select 'milestones' for **Task3**.

Task name	Assigned	Task type	Task Total qty
Task1		task	
Task2		task	
Task3		milestones	

Then click create/update chart to see our Gantt chart. You can see the shapes of **Task1** and **Task2** are the task type, while the shape of **Task3** is the milestones type.



Before finishing this chapter, let me introduce some other fields you might need to use during the project.



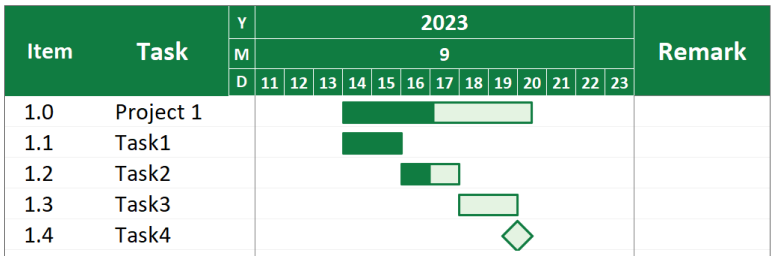
In cell C2, it's for you to enter the name of the person responsible for this project. In cell F2, it's for you to describe this project. And regarding the field '**Assigned**' in the data table, it is for you to enter the name of the person responsible for each task.

Until now, we just finished introducing the project planning. In the next chapter, you will learn what shall you do when a project begins.

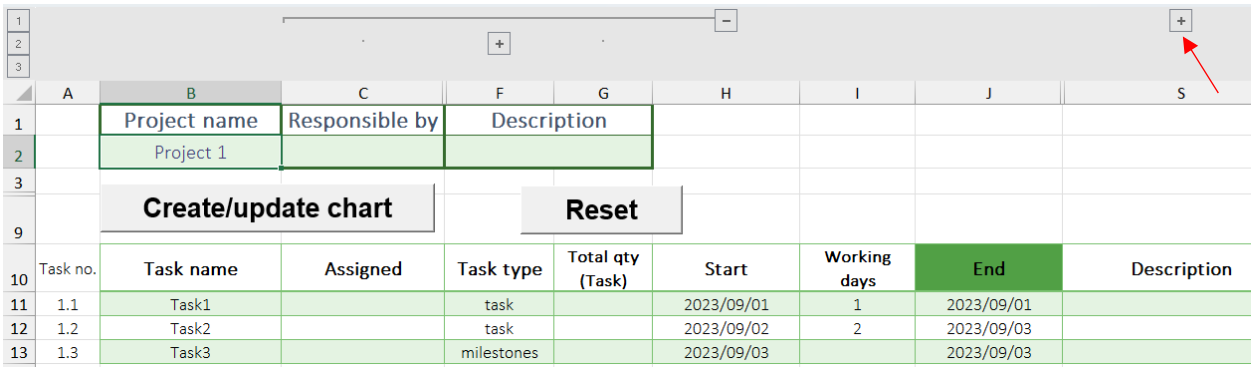
Chapter 4 What Shall You Do When a Project Begins

Introduction to Plan bar and Progress bar

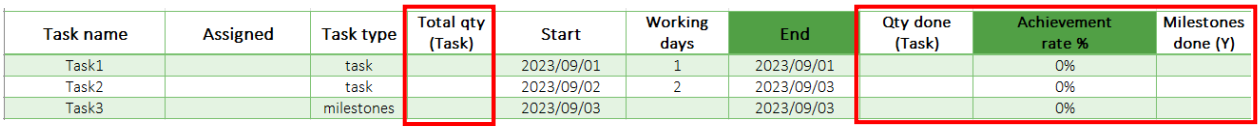
When a project begins, you shall check on the progress very often and update the plan for each task, depending on how the project goes. In the Gantt chart, we can understand the progress of tasks by using another chart series overlapping the original one. We call it **Progress bar** and call the original chart series **Plan bar** afterward in this manual.



Of course, we have prepared the relevant fields in the data table for you, which we group them by default. Let's open it by clicking the icon, as in the photo below.



You will see 5 columns showing up, we first focus on the fields '**Qty done(Task)**', '**Achievement rate %**', and '**Milestones done (Y)**' plus the field '**Total qty (Task)**' which we have yet to introduce in the previous chapter.



How to calculate the width of Progress bar in the Gantt chart

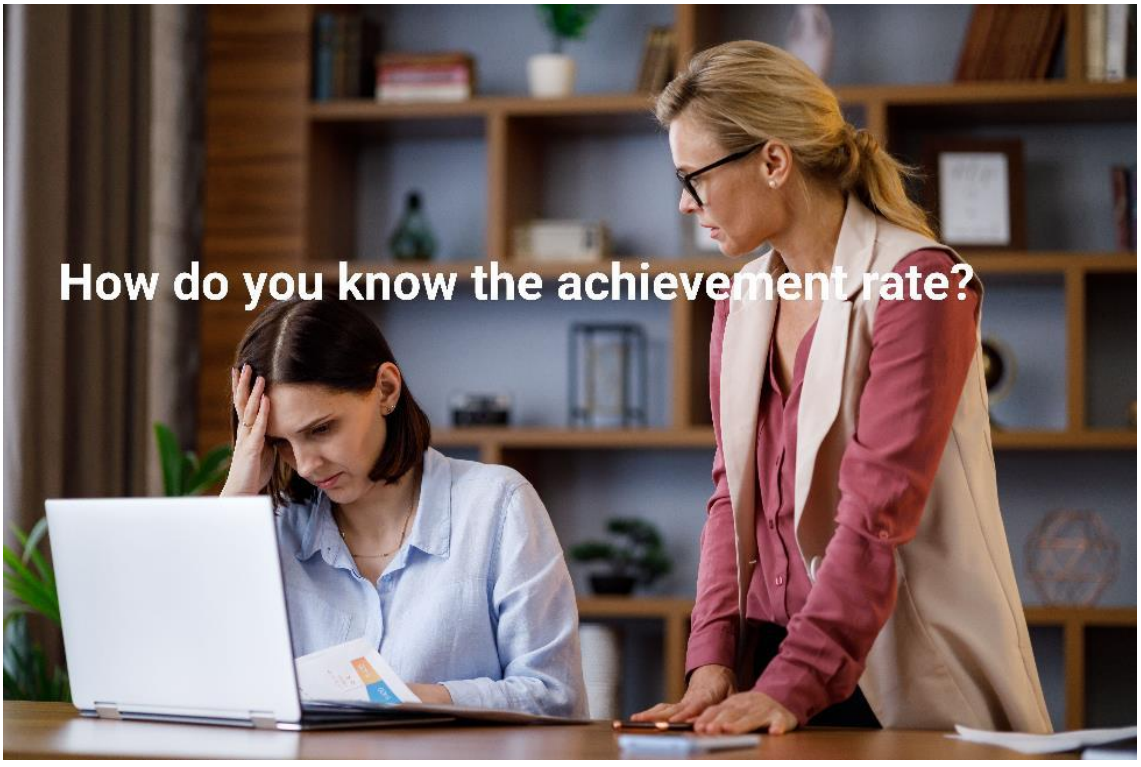
The formula to calculate the width of **Progress bar** is = **[Working days]** × **[Achievement rate %]**.

For example, the working days of **Task2** are 2 days, and the achievement rate is 50%, so the width of the **Progress bar** is = 2 days × 50% = 1 day.

Item	Task	Y	2023												Remark
		M	9												
		D	11	12	13	14	15	16	17	18	19	20	21	22	23	
1.0	Project 1														
1.1	Task1														
1.2	Task2														
1.3	Task3														
1.4	Task4														

One day

Users might think it is enough that they only need to update the achievement rate. However, in the real world, your boss may ask you how you know the achievement rate? Do you just estimate it or...?

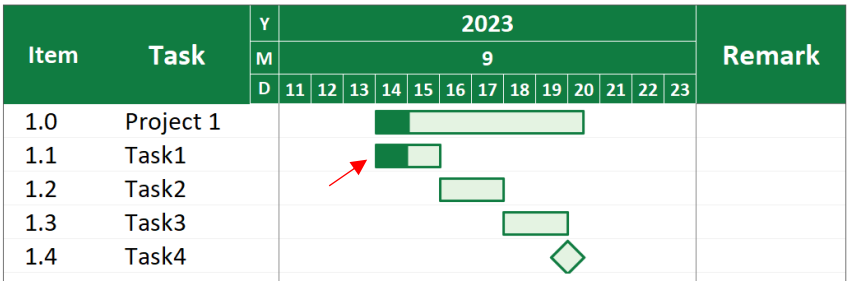


Therefore, we provide a way to calculate the achievement rate that is to quantify your work.
The formula of the field '**Achievement rate %**' is = [**Qty done (Task)**] / [**Total qty (Task)**] × 100%.

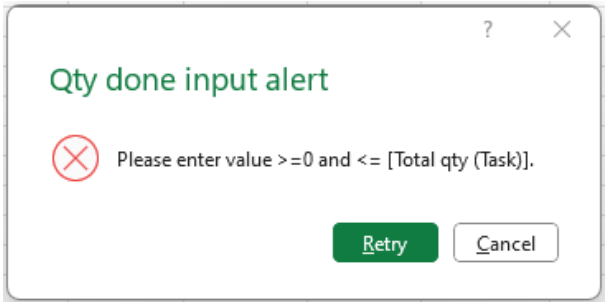
For example, if you plan to complete **Task1** by 10 steps, entering 10 in the field '**Total qty (Task)**'. And at a certain moment during the project that you have completed 5 steps, entering 5 in the field '**Qty done (Task)**'. Then the '**Achievement rate %**' equals to = 5/10 = 50%, as in the photo below.

Task name	Assigned	Task type	Total qty (Task)	Start	Working days	End	Qty done (Task)	Achievement rate %
Task1		task	10	2023/09/14	2	2023/09/15	5	50%
Task2		task		2023/09/16	2	2023/09/17	0	0%
Task3		task		2023/09/18	2	2023/09/19	0	0%
Task4		milestones		2023/09/19		2023/09/19	0	0%

Then click Create/update chart button to see our Gantt chart.



If users accidentally type 0 instead of 10 in the field '**Total qty (Task)**', an error might occur or you might get a wrong achievement rate %. For this reason, we have set up a data validation for this situation. For example, if user mistype 0 in the field '**Total qty (Task)**' and then enter 5 in the field '**Qty done (Task)**', an input error alert will show up, as in the photo below.



When seeing this kind of error alert, please read the message and check relevant fields.

How to mark the Milestones chart when it is completed

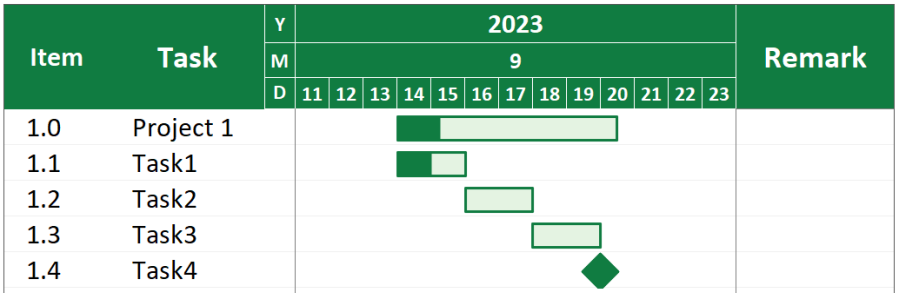
As we introduce in Chapter 2, milestones type is for events planned to be a significant point in the project. So it is no need to enter a value in the field '**Total qty (Task)**'. However, if you want to enter a value in the fields '**Total qty (Task)**' and '**Qty done (Task)**', you can do that. It doesn't affect our Gantt chart.
For example, if you plan to have two materials arriving at the site on Oct. 7, it turns out only one material arriving. Then you can input relevant values in these two fields.

It is easy to mark complete milestones in our model. Users only need to enter "Y" in the field '**Milestones done (Y)**'. For example, we enter "Y" in the field '**Milestones done (Y)**' for **Task4**.

Task name	Assigned	Task type	Total qty (Task)	Start	Working days	End	Qty done (Task)	Achievement rate %	Milestones done (Y)
Task1		task	10	2023/09/14	2	2023/09/15	5	50%	
Task2		task		2023/09/16	2	2023/09/17	0	0%	
Task3		task		2023/09/18	2	2023/09/19	0	0%	
Task4		milestones		2023/09/19		2023/09/19	0	100%	Y

You would notice that the field "**Achievement rate %**' becomes 100%.

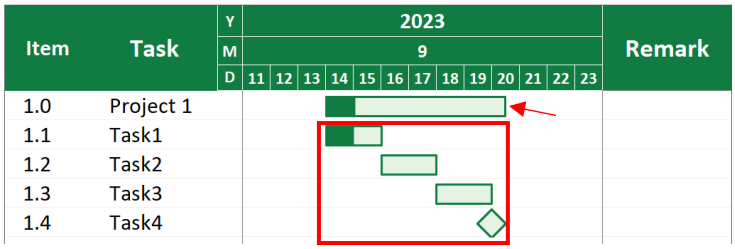
Then let's click Create/update chart button to see our Gantt chart.



It already marked the milestones chart completed with a dark green color.

Chapter 5 Introduction to Parent Task and Children Task

In Chater 2, we have introduced the summarized schedule in the Gantt chart, as in the photo below (the first row). In professional software of project management, they call it parent task, and call all the other tasks under the parent task children task.

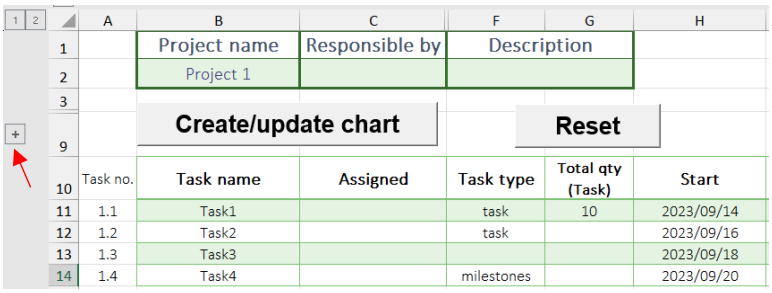


Item	Task	Y	2023												Remark
		M	9												
		D	11	12	13	14	15	16	17	18	19	20	21	22	23	
1.0	Project 1														
1.1	Task1														
1.2	Task2														
1.3	Task3														
1.4	Task4														

Because we have already introduced children task in the previous chapters, let's jump into the topic of the parent task.

For the parent task, there are also **Plan bar** and **Progress bar**. **Plan bar** means schedule with light green color and **Progress bar** means progress with dark green color.

In our model, although users do not need to enter data for parent task, it is still a good practice to know how it works. By default, we group the data table of the parent task. Let's open it by clicking the icon, as in the photo below.

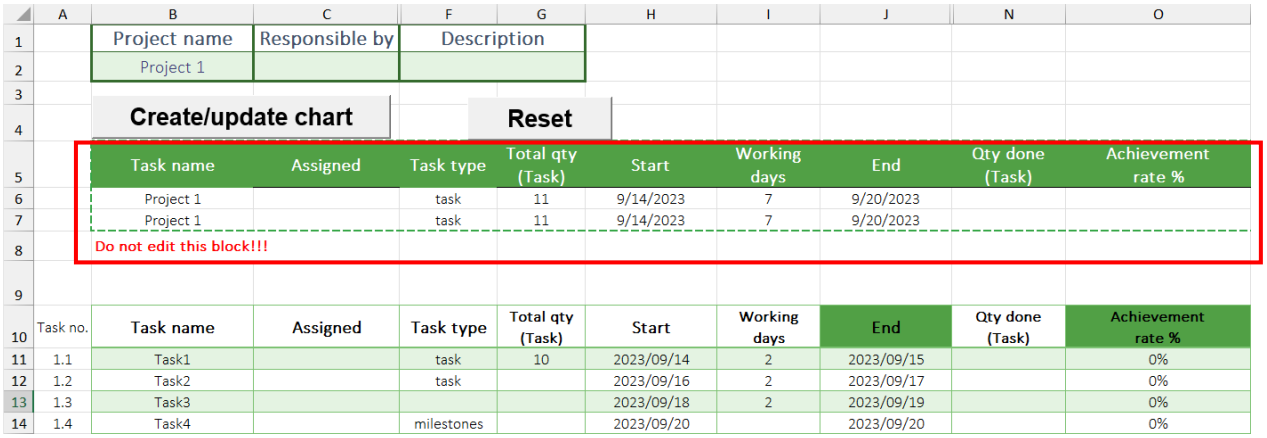


	Project name	Responsible by	Description
	Project 1		

Create/update chart | Reset

Task no.	Task name	Assigned	Task type	Total qty (Task)	Start
1.1	Task1		task	10	2023/09/14
1.2	Task2		task		2023/09/16
1.3	Task3				2023/09/18
1.4	Task4		milestones		2023/09/20

You will see the rows 4 to 8 showing up and see our parent task data table there. Please don't edit this table unless you know how it works.



	Project name	Responsible by	Description
	Project 1		

Create/update chart | Reset

Task name	Assigned	Task type	Total qty (Task)	Start	Working days	End	Qty done (Task)	Achievement rate %
Project 1		task	11	9/14/2023	7	9/20/2023		
Project 1		task	11	9/14/2023	7	9/20/2023		

Do not edit this block!!!

Task no.	Task name	Assigned	Task type	Total qty (Task)	Start	Working days	End	Qty done (Task)	Achievement rate %
1.1	Task1		task	10	2023/09/14	2	2023/09/15		0%
1.2	Task2		task		2023/09/16	2	2023/09/17		0%
1.3	Task3				2023/09/18	2	2023/09/19		0%
1.4	Task4		milestones		2023/09/20		2023/09/20		0%

1. Plan bar of parent task

The calculation of the start date and the end date of **Plan bar** of parent task are intuitive. The start date is the smallest date from children tasks. Which formula is = SMALL(Project1[**Start**], 1) .

The end date is the largest date from children tasks. Which formula is = LARGE(Project1[**End**], 1) .

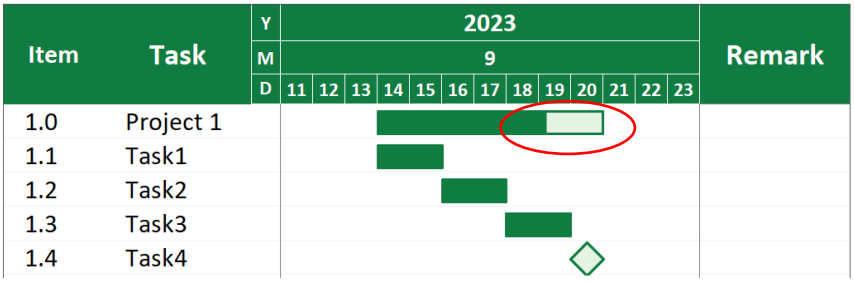
And the working days of parent task is = [**End**] – [**Start**] +1.

2. Progress bar of parent task

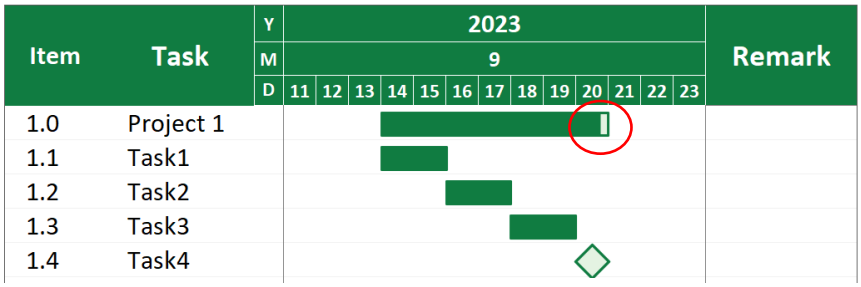
It is a bit tricky how **Progress bar** of parent task works. The calculation of the width of **Progress bar** is = [**Working days**] × [**Achievement rate %**]. Which is in the same way when calculating the width of **Progress bar** of children task.

However, the formula of the achievement rate of parent task does not equal to [**Qty done (Task)**] / [**Total qty (Task)**] as children task does. Instead, its formula is the average of all the children tasks. The formula is = AVERAGE(Project1[Achievement rate %]) .

But in some case, it does not look intuitive in our Gantt chart by using this formula. For example, if we have completed **Task1~3** (task type).and have yet to complete **Task4** (milestones type), the average of **Task1~4** is 75%. The width of **Progress bar** is a bit too short as we already complete **Task1~3**.



Because it will not take days to complete a task with milestones type, we shall not take it as a 100% denominator in the formula of achievement rate. The correct chart shall be like the photo below.



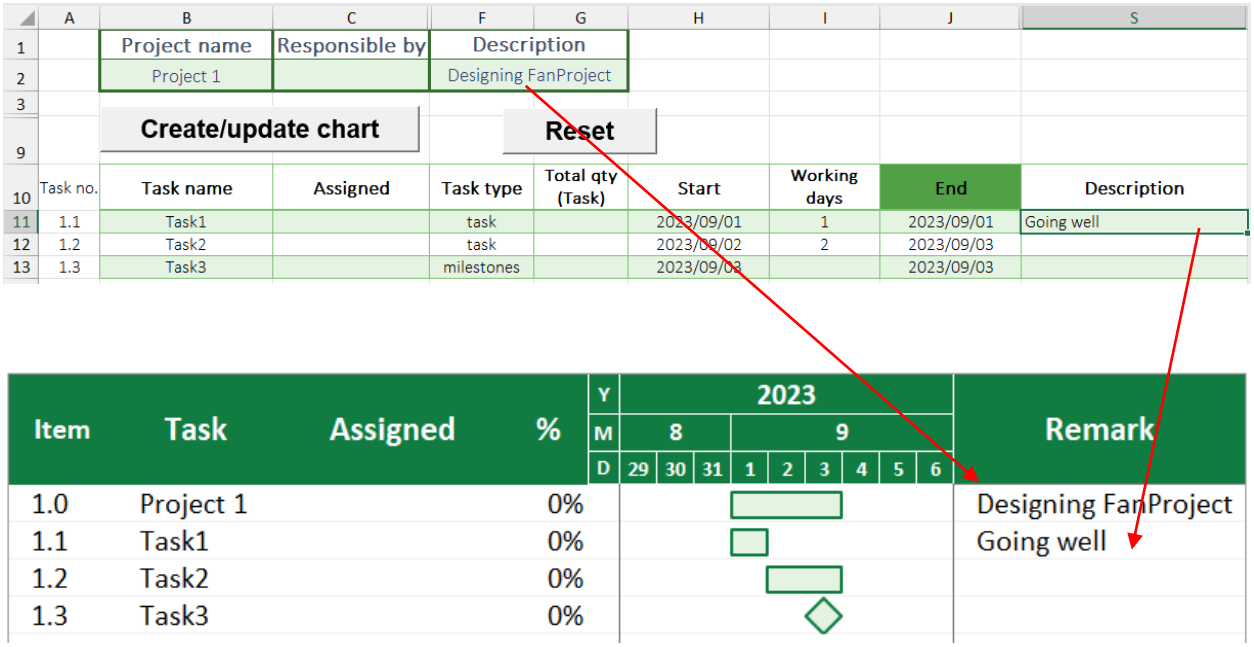
The formula we actually use here is,

$$= \frac{Avg.achievement\ rate\ of\ tasks + (Avg.achievement\ rate\ of\ milestones) \times 0.1}{The\ rows\ of\ tasks + the\ rows\ of\ milestones\ \times 0.1}$$

We use a coefficient of 0.1 to decrease the influence of milestones in the formula.
That is all you need to know about the parent task.

Add description for parent task and children task

There are fields for users to add description for parent task and children task, as in the photo below.



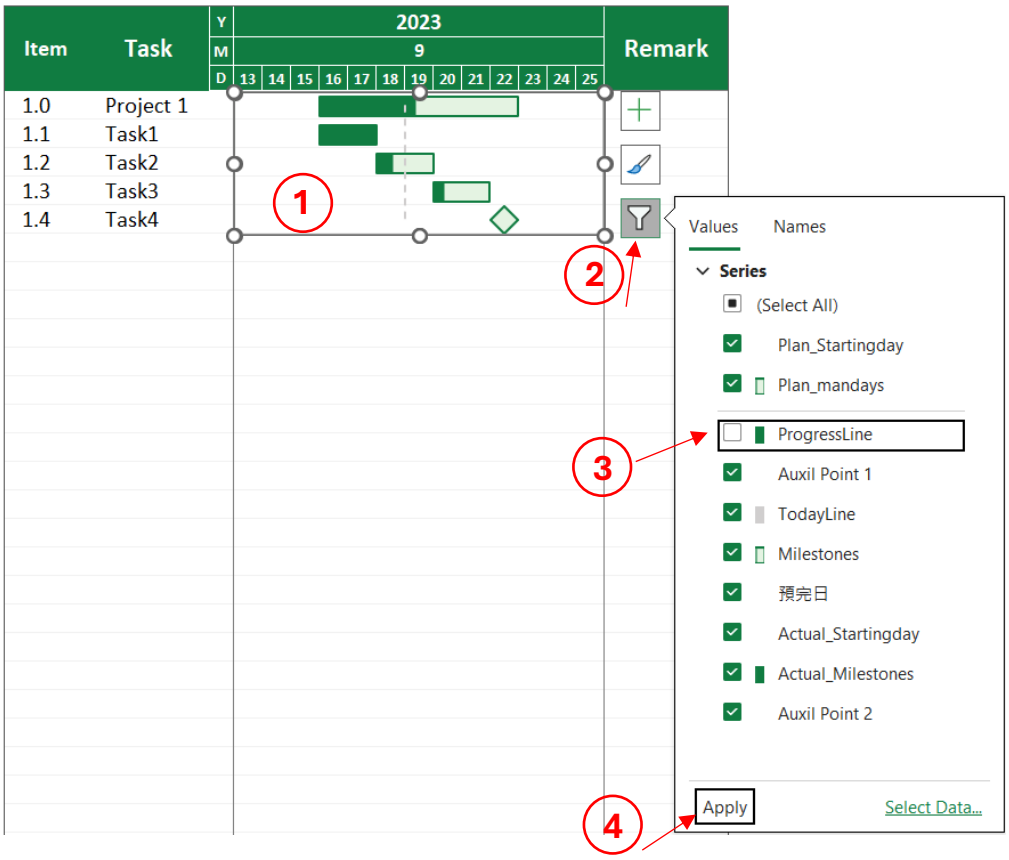
	A	B	C	F	G	H	I	J	S
1		Project name	Responsible by	Description					
2		Project 1		Designing FanProject					
3									
9		Create/update chart		Reset					
10	Task no.	Task name	Assigned	Task type	Total qty (Task)	Start	Working days	End	Description
11	1.1	Task1		task		2023/09/01	1	2023/09/01	Going well
12	1.2	Task2		task		2023/09/02	2	2023/09/03	
13	1.3	Task3		milestones		2023/09/03		2023/09/03	

Item	Task	Assigned	%	Y	2023								Remark
				M	8			9					
				D	29	30	31	1	2	3	4	5	6	
1.0	Project 1		0%											Designing FanProject
1.1	Task1		0%											Going well
1.2	Task2		0%											
1.3	Task3		0%											

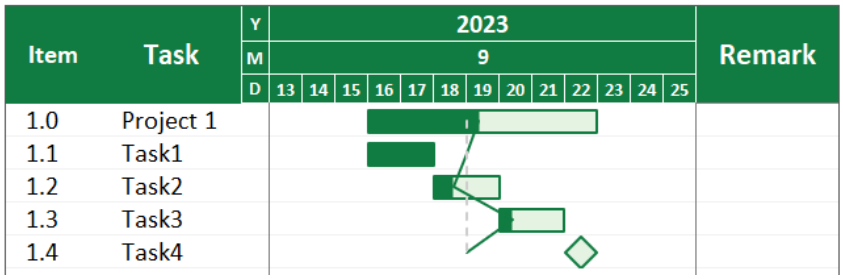
Chapter 6 Introduction to Progress Line and how to Catch up on Progress

Progress line and today line

By default, we hide the progress line and show the today line, which we use a grey dotted line, in the Gantt chart. Users can turn on the progress line by selecting the chart, click the filter icon, check the series of '**ProgressLine**' and click apply, as in the photo below.

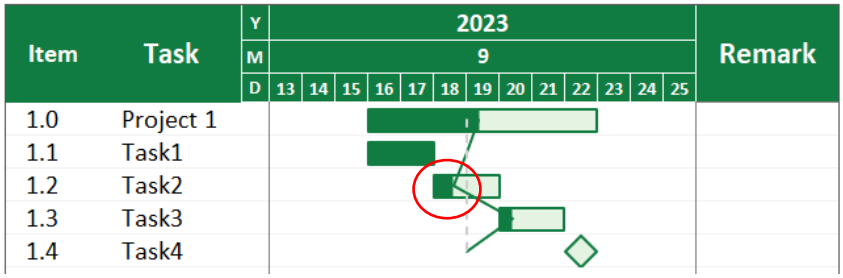


Click Apply, then you will see there is a dark green line showing up.

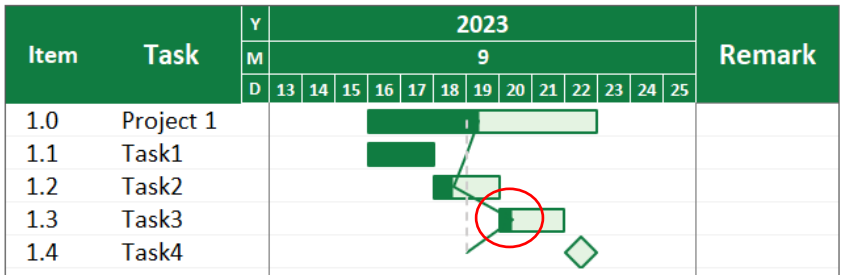


We call this line **Progress line**. **Progress line** is an auxiliary line to help users understand the progress of your project better. The position of each point on the line is decided by today line and the achievement rate of each task, which means the position of the endpoint of **Progress bar**.

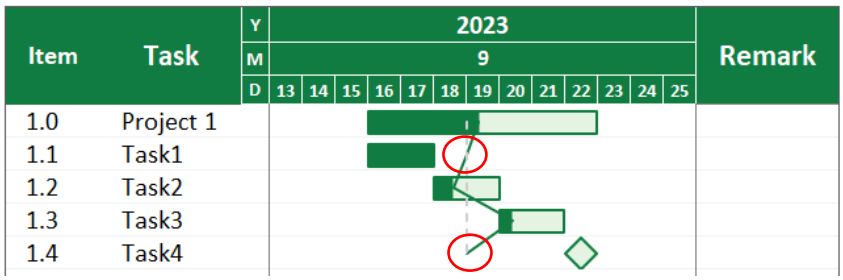
For example, you shall complete 50% of work of **Task2** by today but you only complete 30%. Then the point on **Progress line** for **Task2** will be at the position of the endpoint of **Progress bar**. Which point is on the left side of the today line, so users can know that they have fallen behind schedule.



For another example, you plan to start **Task3** on Sep. 20, but you have started earlier and already completed 20% of work on Sep.18. Then the point on **Progress line** for **Task3** will be at the position of the endpoint of **Progress bar**. Which point is on the right side of the today line, so users can know that they are working ahead of schedule.



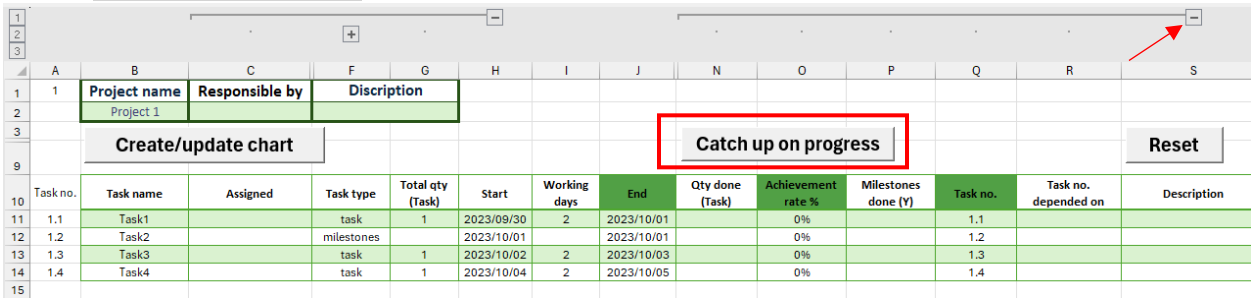
Regarding to **Task1** and **Task4**, because they are all on schedule. So the points on **Progress line** for them are at the position of the today line.



How to catch up on progress with just one click

We believe that many people in the office do not have so much time to check the achievement rate of each task every day. If nothing special happens, it should catch up on progress. Therefore, we design a functionality to let users catch up on progress easily with just one click.

In our data table, after opening the grouping columns from J to S, you can find there is a command button Catch up on progress, as in the photo below. Which we are going to use a second later.

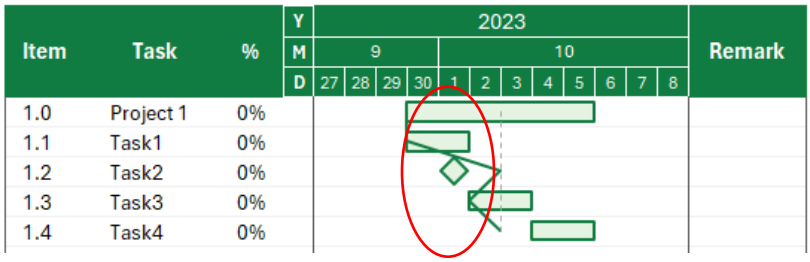


	Project name	Responsible by	Discription
	Project 1		

Create/update chart | Catch up on progress | Reset

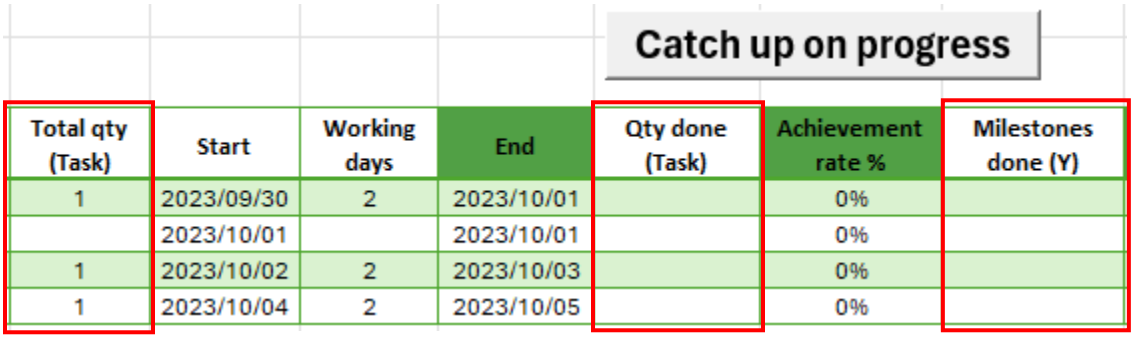
Task no.	Task name	Assigned	Task type	Total qty (Task)	Start	Working days	End	Qty done (Task)	Achievement rate %	Milestones done (Y)	Task no.	Task no. depended on	Description
1.1	Task1		task	1	2023/09/30	2	2023/10/01		0%		1.1		
1.2	Task2		milestones		2023/10/01		2023/10/01		0%		1.2		
1.3	Task3		task	1	2023/10/02	2	2023/10/03		0%		1.3		
1.4	Task4		task	1	2023/10/04	2	2023/10/05		0%		1.4		

Firstly, let's see how does this project planning look like by clicking Create/update chart.
In the Gantt chart, you can find that we shall complete '**Task1**' and '**Task2**' and complete 50% of '**Task3**' by today.



Item	Task	%	Remark
1.0	Project 1	0%	
1.1	Task1	0%	
1.2	Task2	0%	
1.3	Task3	0%	
1.4	Task4	0%	

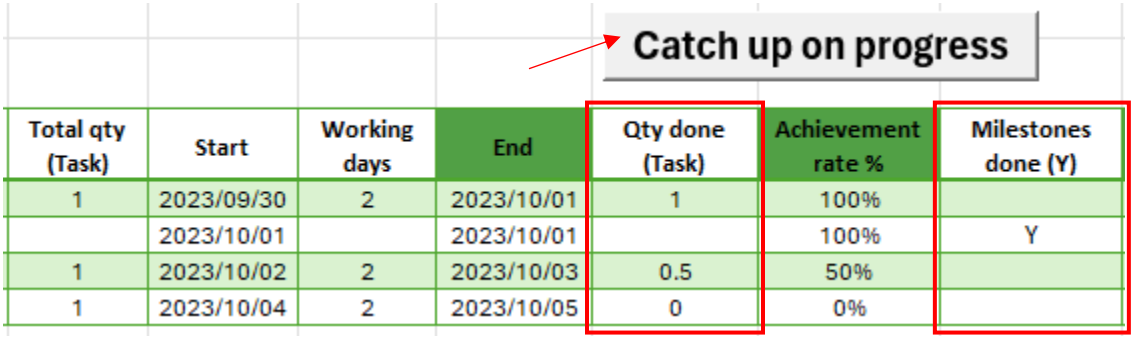
Therefore, if we would like to make our Gantt chart catch on progress, we need to calculate the value of the field '**Qty done (Task)**' plus entering "Y" in the field '**Milestones done (Y)**' for the milestones type.



Catch up on progress

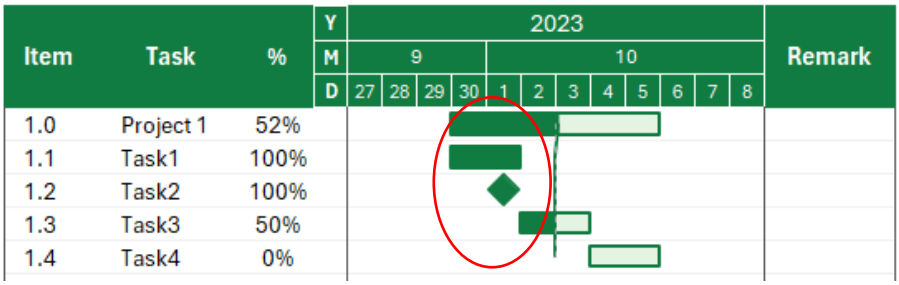
Total qty (Task)	Start	Working days	End	Qty done (Task)	Achievement rate %	Milestones done (Y)
1	2023/09/30	2	2023/10/01		0%	
	2023/10/01		2023/10/01		0%	
1	2023/10/02	2	2023/10/03		0%	
1	2023/10/04	2	2023/10/05		0%	

The great news is by using our model, users do not have to worry about this problem anymore. You can just click the Catch up on progress button and it will help you fill out these two fields '**Qty done (Task)**' and '**Milestones done (Y)**', as in the photo below,



Total qty (Task)	Start	Working days	End	Qty done (Task)	Achievement rate %	Milestones done (Y)
1	2023/09/30	2	2023/10/01	1	100%	
	2023/10/01		2023/10/01		100%	Y
1	2023/10/02	2	2023/10/03	0.5	50%	
1	2023/10/04	2	2023/10/05	0	0%	

Then let's click Create/update chart button to see our Gantt chart. Boom, we already caught up on progress.

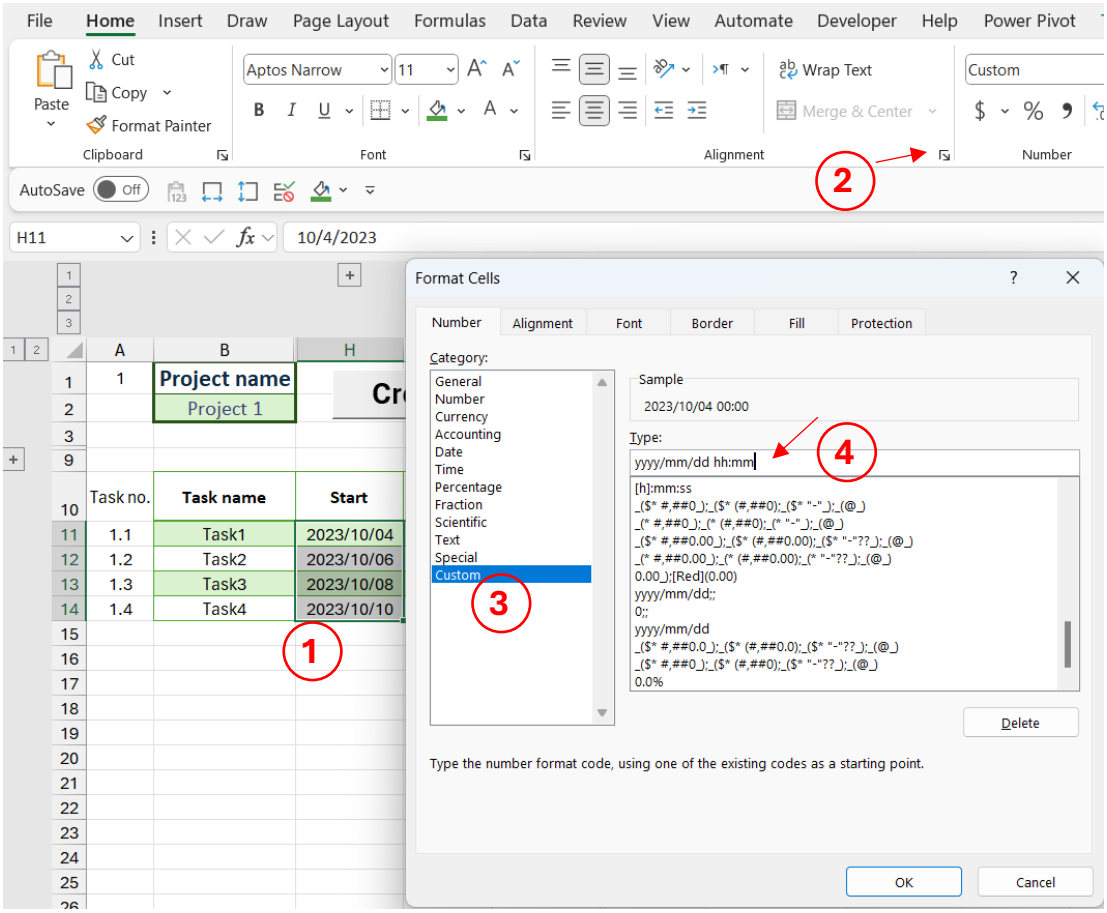


Chapter 7 How to Schedule Your Task Which Duration Among One Day

It is common that the duration of the task is more than 1 day. However, there are some kind of tasks that it only takes hours to complete. So how to schedule this kind of task in our model?
By default, we set the format of date to yyyy/mm/dd in the fields '**Start**' and '**End**', as in the photo below.

Start	Working days	End
2023/09/16	2	2023/09/17
2023/09/18	2	2023/09/19
2023/09/20	2	2023/09/21
2023/09/22		2023/09/22

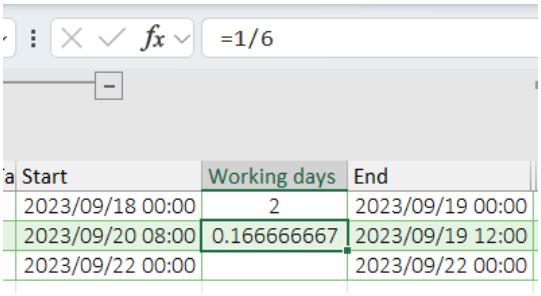
In Excel, the date & time value of 2023/09/16 is actually 2023/09/16 00:00. If you would like to show the format of date in yyyy/mm/dd hh:mm, you can change it in the Number format window, as in the photo below.



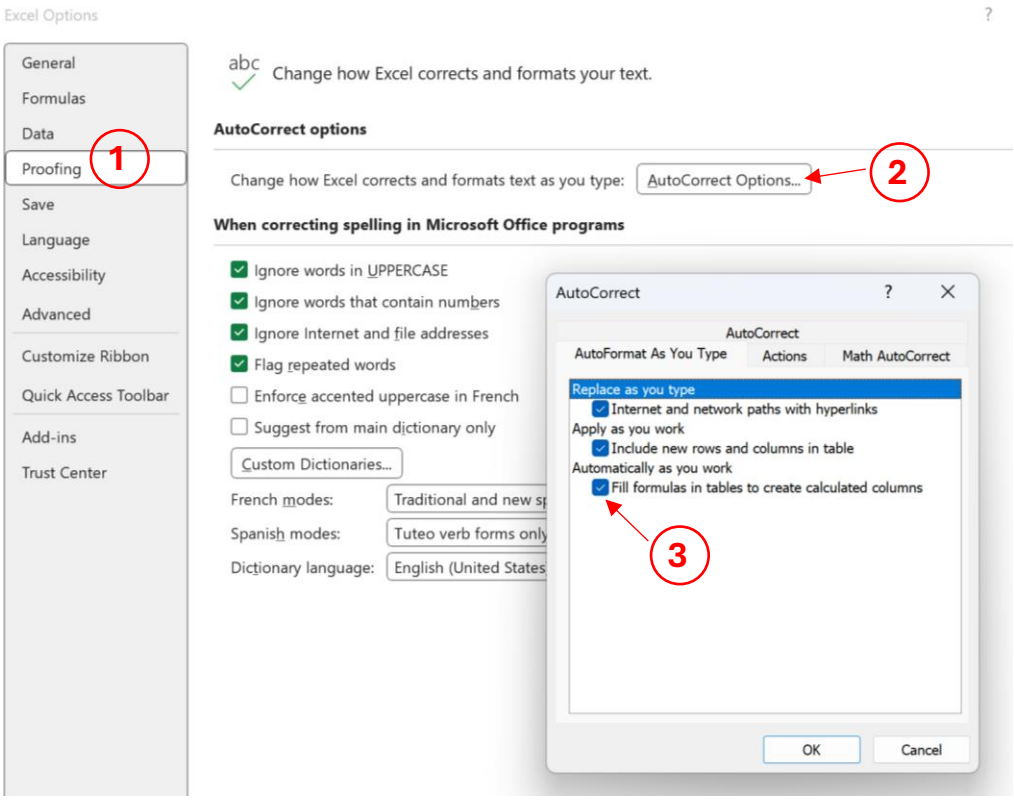
After typing the format of date & time you would like, click OK. Then the format has become date & time, as in the photo below.

Start	Working days	End
2023/09/16 00:00	2	2023/09/17 00:00
2023/09/18 00:00	2	2023/09/19 00:00
2023/09/20 00:00	2	2023/09/21 00:00
2023/09/22 00:00		2023/09/22 00:00

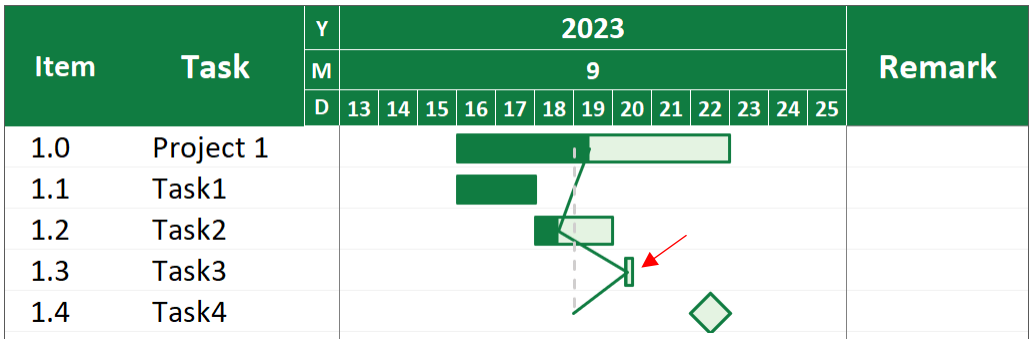
For example, we enter 2023/09/20 08:00 in the field '**Start**' for **Task3**, and enter 4 hours in the field '**Working days**'. But the unit of the field '**Working days**' is in days, users need to convert hours into days which equals to 4/24=1.6667. Otherwise, users can also directly enter the formula '= 1/6' in the formula bar, as in the photo below.



By the way, be careful of the automatic formula filling down function in Excel table. You can disable this function at Excel Options, as in the photo below.

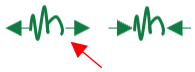


Then let's click Create/update chart button to see our Gantt chart.

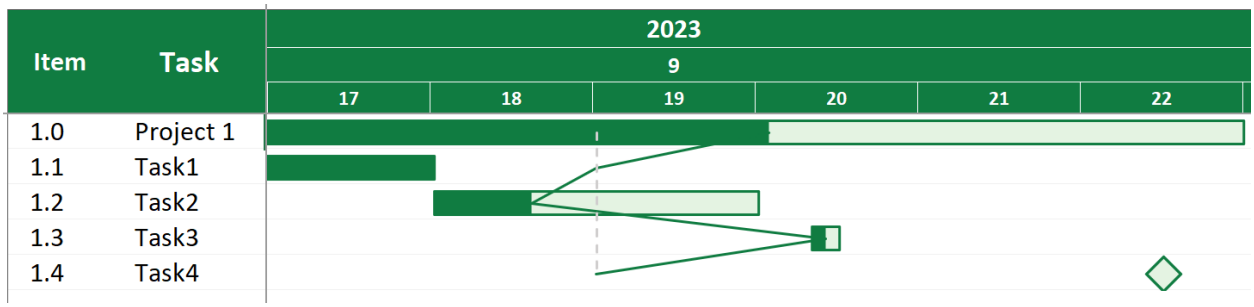


You can see that the width of **Task3** has become short (4 hours).

If you feel the width of the bar is too short in the Gantt chart, you can use another functionality in our model. In the sheet("**Gantt chart**"), there are two command shapes for users to scale up/down the time axis of the chart, as in the photo below.



You can click the left side of shapes to scale up the time axis of the chart for checking on the progress of **Task3**.



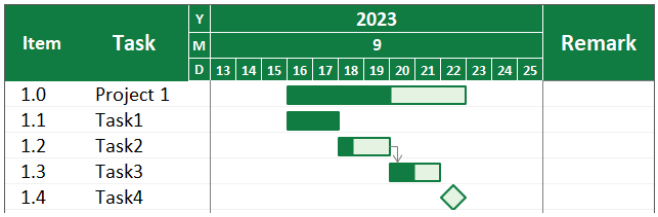
We will explain this functionality in more detail in Chapter 9.

Chapter 8 How to Mark the Relationship Line Between Tasks

In the professional software of project management, there are 4 relationships between tasks, which include,

1. Start from Start
2. Start from End
3. End to Start
4. End to End

In our model, we only have one relationship that is Start from End.
What does this relationship mean? In the photo below, you can see there is a grey line with an arrow between **Task2** and **Task3**.

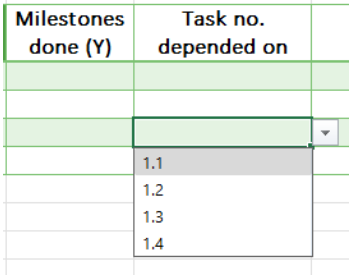


This line means that you can start **Task3** only if **Task2** is complete. For example, in a project of developing product, we must finish the marketing first then start selling the product.
The purpose of this line is to help users easily know the relationship between tasks and know which task needed to be done first.

Let me explain how to add the relationship line in our model. Back to our data table in **Project 1**.
You can see there is a field '**Task no. depended on'** on the right side of the data table.

Achievement rate %	Milestones done (Y)	Task no. depended on	Discription
100%			
30%			
50%			
0%			

It means that which task is the one that current task depends on. In this example, **Task2** is the one that **Task3** depends on. Therefore, you shall enter **Task2**'s task no. in the cell.
We have already prepared a dynamic dropdown list for users to select, as in the photo below.



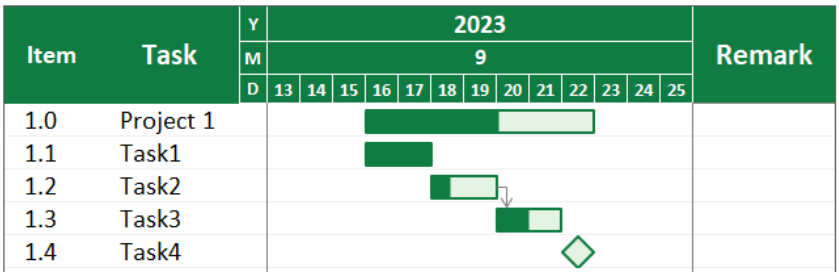
For knowing the task's number of each task, you can find it at the beginning of the data table, as in the photo below.

Task no.	Task name	Assigned	Task type
1.1	Task1		task
1.2	Task2		task
1.3	Task3		task
1.4	Task4		milestones

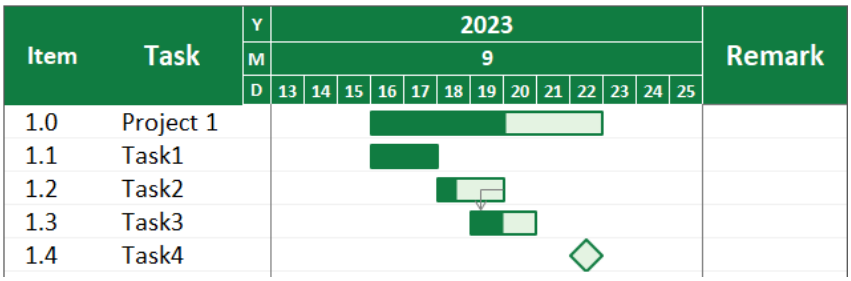
In this example, the task number for Task2 is 1.2

Milestones done (Y)	Task no. depended on	
	1.2	

Then let's click Create/update chart button to see our Gantt chart.

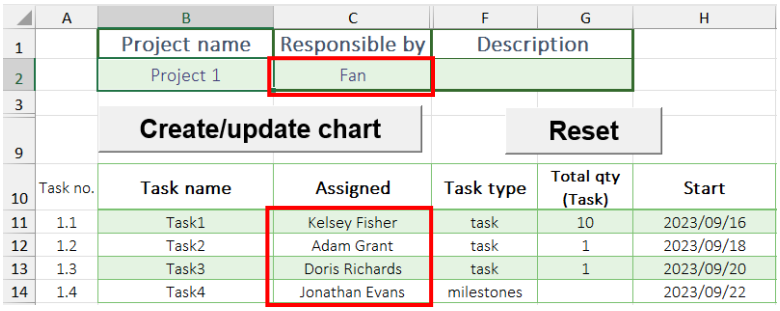


However, this function is only creating a line between the point of the end date for **Task2** and the point of the start date for **Task3**. Therefore, be careful to set the starting date of the task correctly. Otherwise, you may get a strange relationship line, as in the photo below.



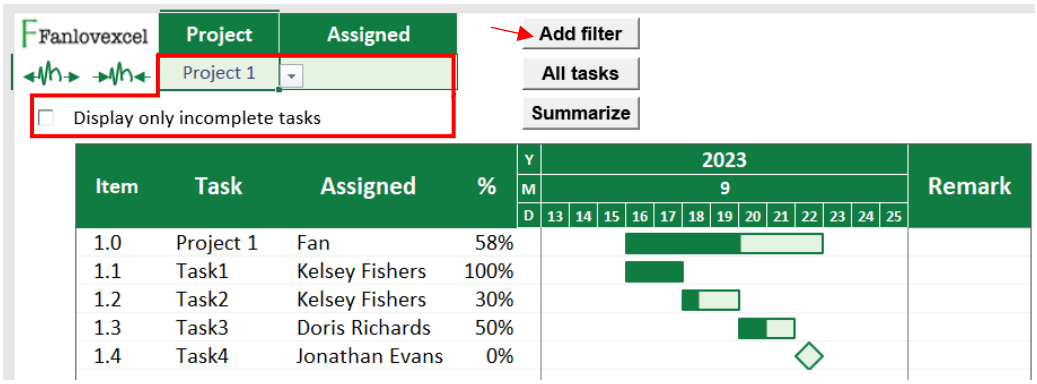
Chapter 9 Everything You Need to Know Regarding the Sheet("Gantt chart")

Before introducing how the sheet("**Gantt chart**") works, let's enter some data in the fields '**Responsible by**' and '**Assigned**', as in the photo below..



	A	B	C	F	G	H
1		Project name	Responsible by	Description		
2		Project 1	Fan			
3						
9		Create/update chart		Reset		
10	Task no.	Task name	Assigned	Task type	Total qty (Task)	Start
11	1.1	Task1	Kelsey Fisher	task	10	2023/09/16
12	1.2	Task2	Adam Grant	task	1	2023/09/18
13	1.3	Task3	Doris Richards	task	1	2023/09/20
14	1.4	Task4	Jonathan Evans	milestones		2023/09/22

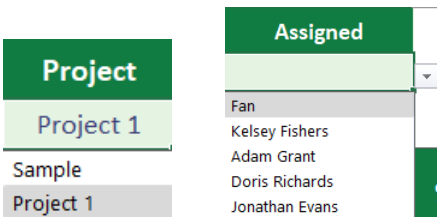
Then click Create/update chart button to go back to the sheet("**Gantt chart**").



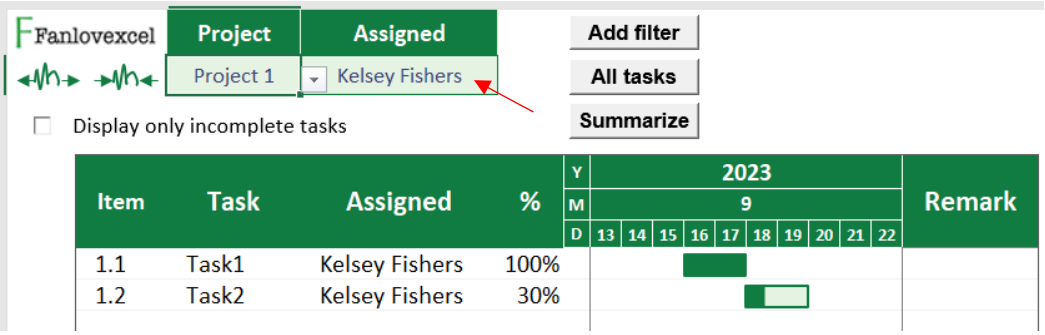
Add filter

We first introduce the functionality of the command button Add filter. In our model, it is all about querying the data by using Excel FILTER function. The function of the button Add filter is to switch the original query to the query which three conditions with AND logic contribute to. The conditions include project name, person responsible for, and whether the task be completed or not.

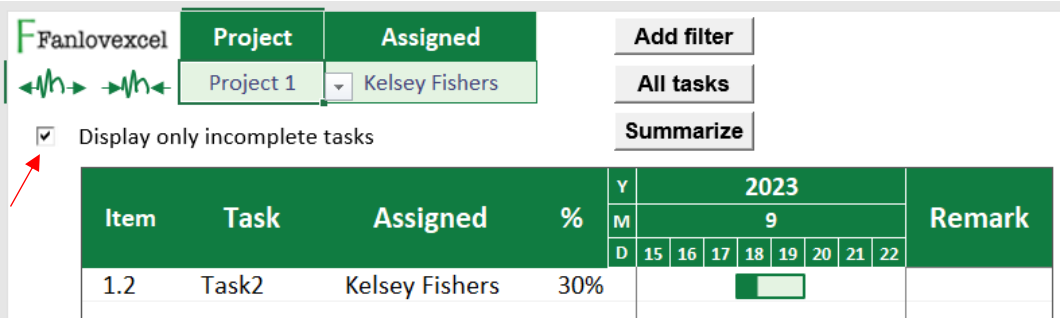
We have prepared a dropdown list for both fields '**Project**' and '**Assigned**' to users, as in the photo below.



For example, if you select Kelsey Fisher in the field '**Assigned**' then click the button Add filter, you will get a Gantt chart with tasks which Kelsey Fisher is responsible.

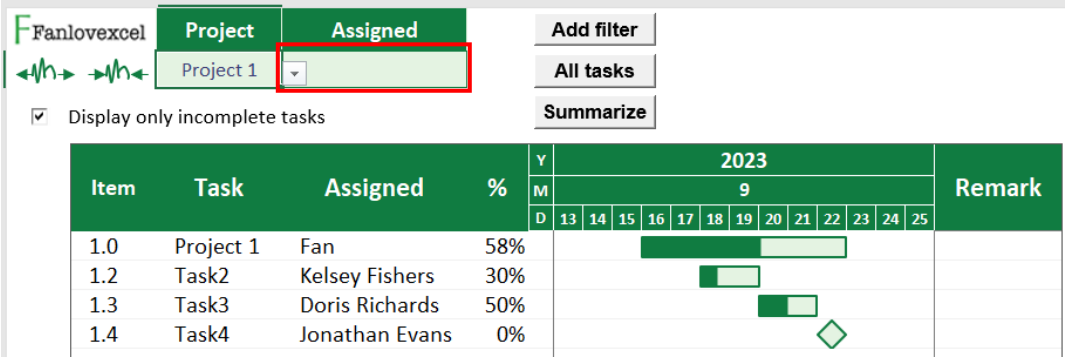


And if you continue checking the checkbox '**Display only incomplete tasks'**, you will get a Gantt chart in which it only shows the incomplete tasks, which Kelsey Fisher is responsible.



In addition, the function of the button Create/update chart in the sheet("**Project_1~X**") is like the button Add filter. The difference between them is that the process of the macro Create/update chart would always first delete the value of the condition '**Assigned**' and leave the checkbox '**Display only incomplete tasks**' in the same condition, then run the remaining macro.

So if we go back to sheet("**Project_1**") and click the button Create/update chart, you will get a Gantt chart in which it only shows the incomplete tasks.

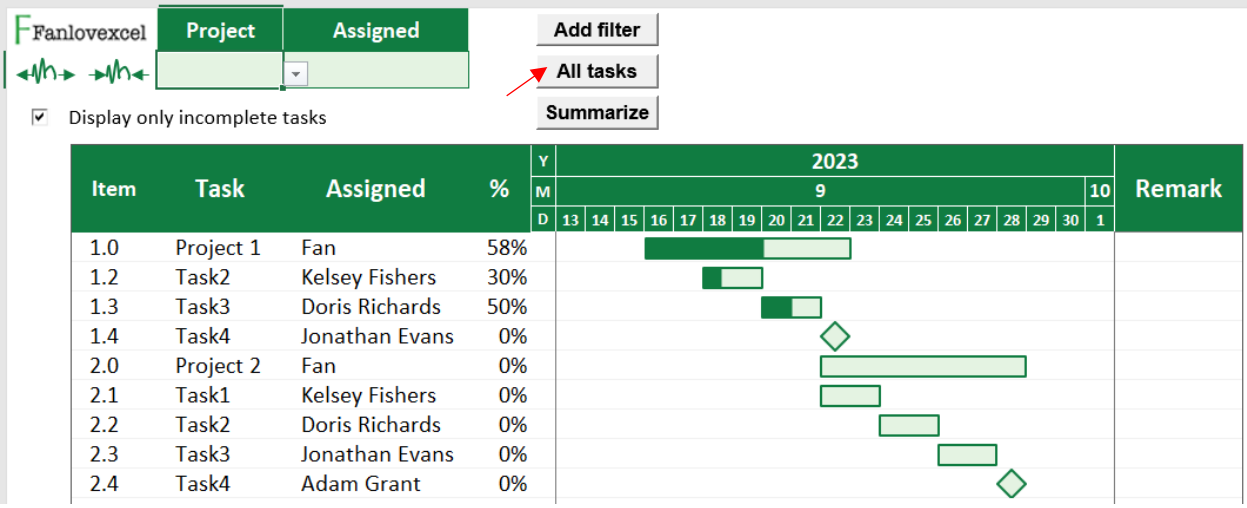


All tasks

Regarding the button All tasks. As it is called, it shows all the tasks from all the projects in our Gantt chart, excluding our sample project.

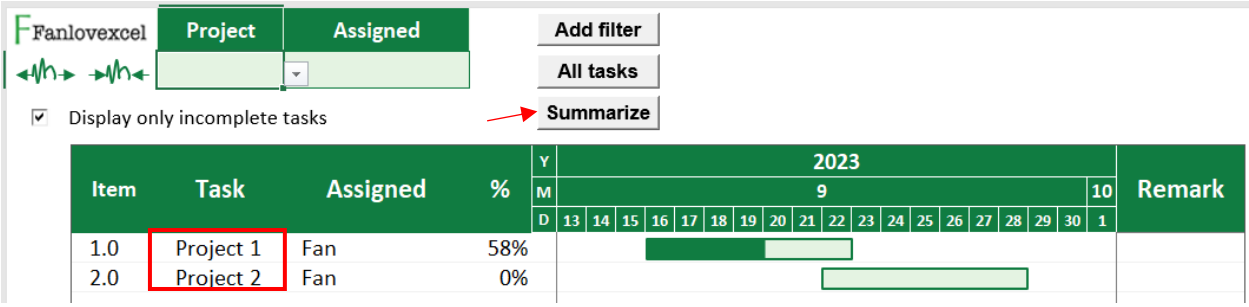
The process of the macro All tasks would always first delete the value of the conditions '**Project**' and '**Assigned**' and leave the checkbox '**Display only incomplete tasks**' in the same condition, then run the remaining macro.

Because in the moment we only have data in project 1, let's input some data in project 2 as well. Then click the button All tasks. You will see it shows both tasks from project 1 and project 2, as in the photo below.



Summarize

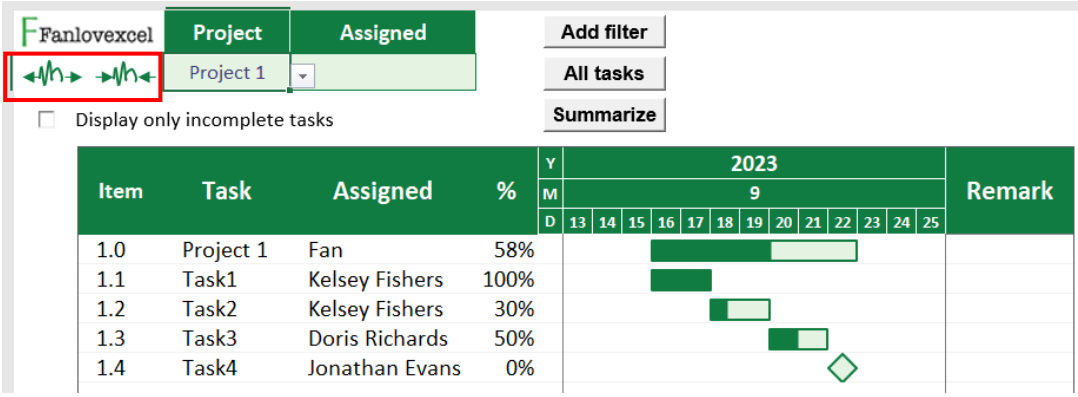
Regarding the button Summarize. As it is called, it shows only the parent tasks from all the projects in our Gantt chart, excluding our sample project.



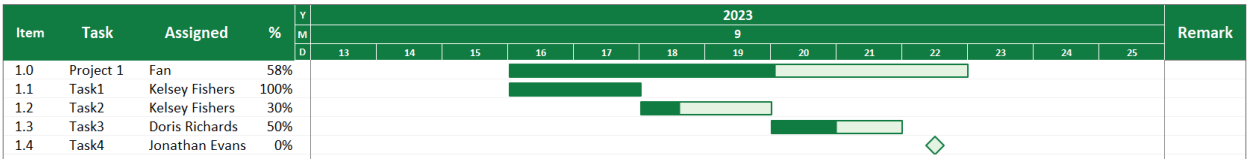
The macro of the button Summarize also leaves the checkbox '**Display only incomplete tasks**' in the same condition.

Scale up/down the time axis of the Gantt chart

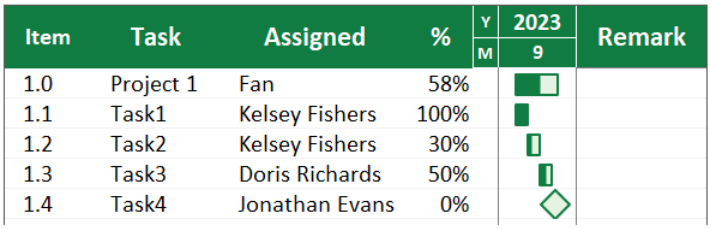
As we already introduced in Chapter 6, we have prepared two command shapes for users to adjust the time axis of the chart, as in the photo below.



By clicking the left one of the shapes, it makes the width of time axis bigger, as in the photo below.



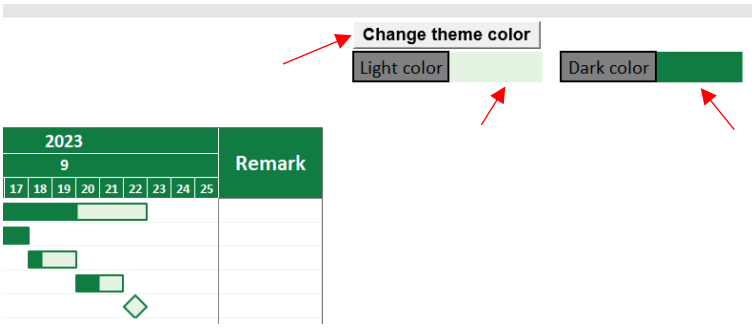
While the right one makes it smaller, as in the photo below.



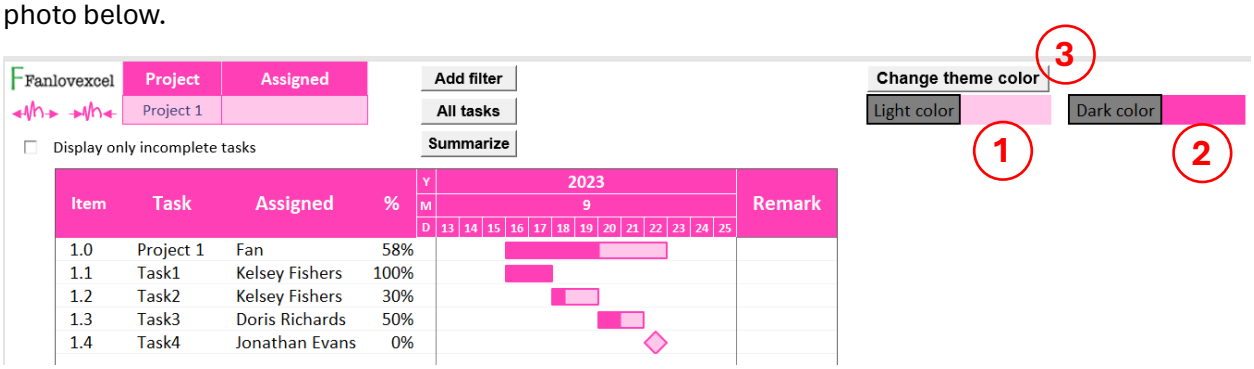
By the way, it has a limit for users to scale up and down the time axis of the Gantt chart.

Change theme color

This functionality is about changing the theme color of the Gantt chart.

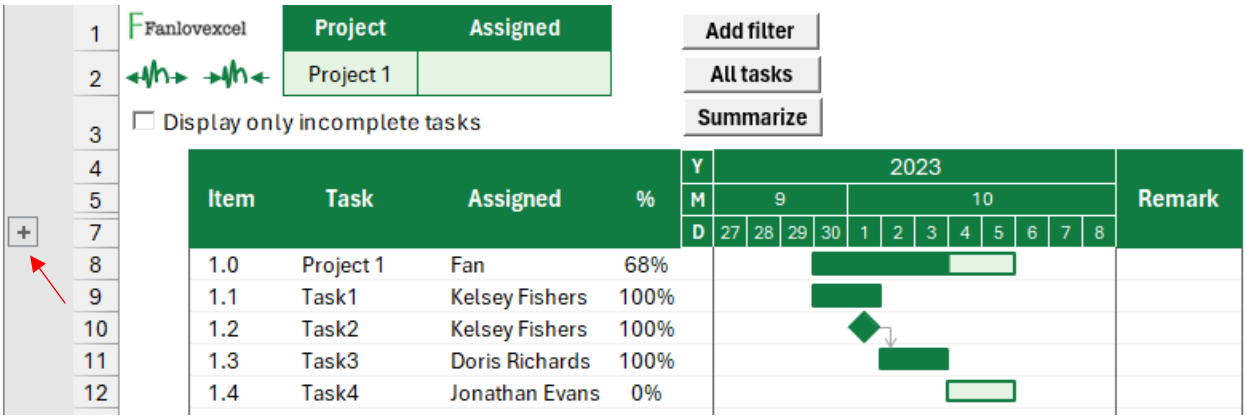


Users can change the fill color of cells '**Light color**' and '**Dark color**', and then click the button Change theme color. For example, we can change the theme color from green to pink, as in the photo below.

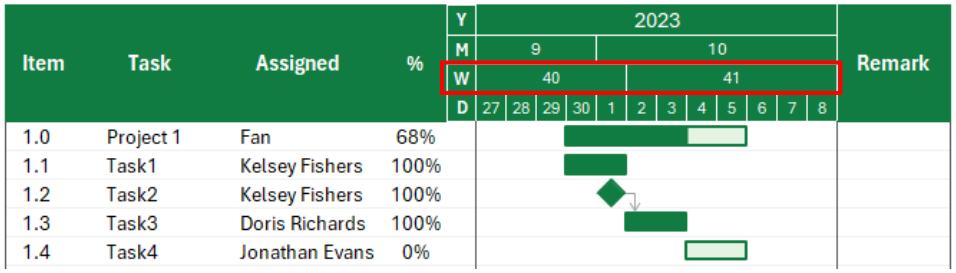


Week number

Until now, there are only year, month, and day in the header of our Gantt chart. We also have prepared the week number for users, which we group this row by default. Users can open this row to see the week number.

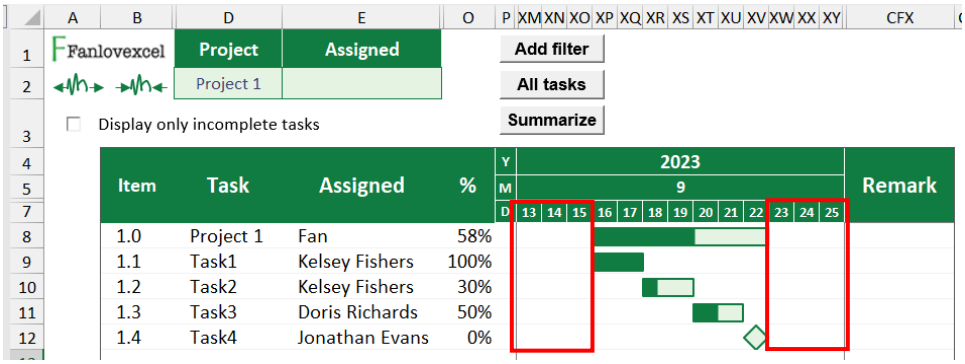


The week number shows up.



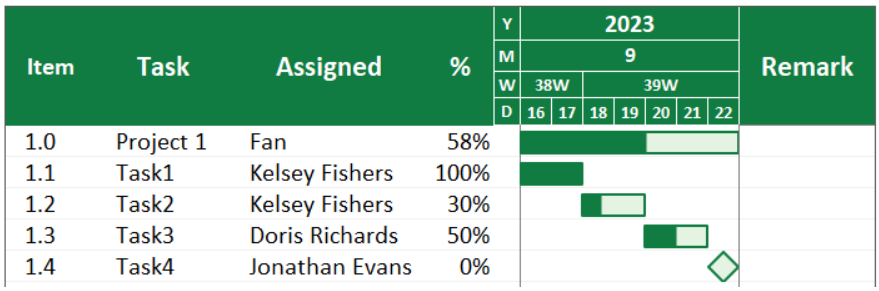
Add 3 days before Start and after End

By default, we add 3 days at the beginning and at the end in our Gantt chart, as in the photo below.



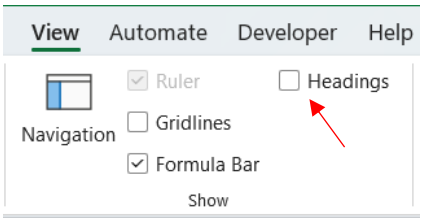
If you don't like this default setting, you can change it by uncheck the checkbox '**Add 3 days before Start and after End'** at the right side in this sheet.

Click the button Add filter. Then the 3 days at the beginning and at the end in our Gantt chart have been removed, as in the photo below.

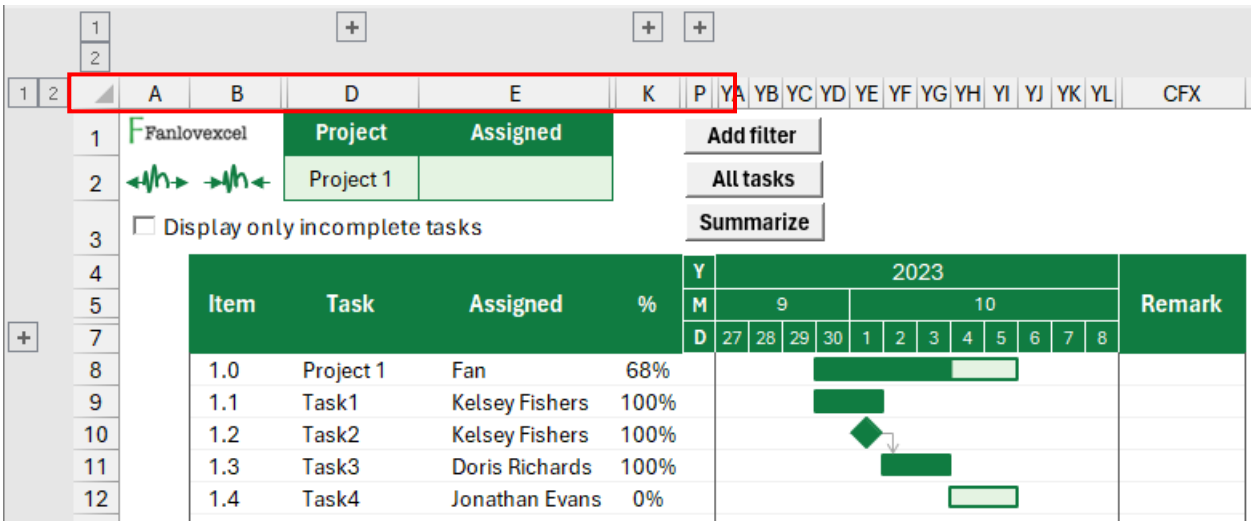


Add fields in the Gantt chart

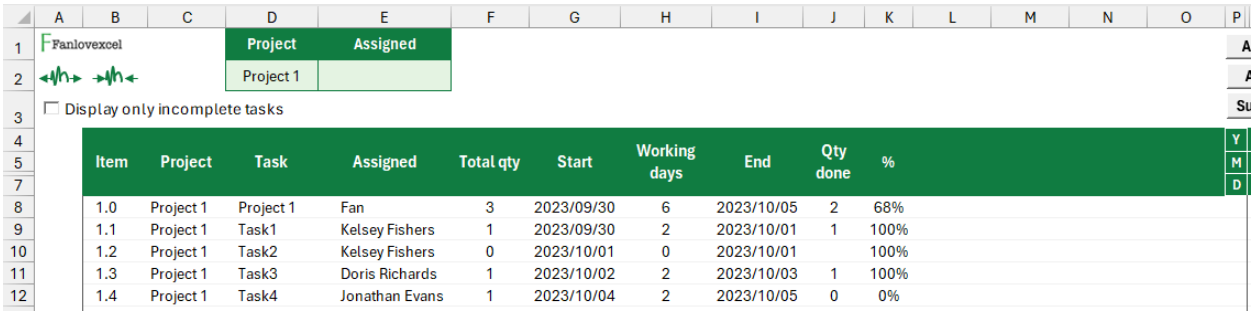
By default, we hide the headings in Excel. Let's unhide the headings by going to tab View, as in the photo below.



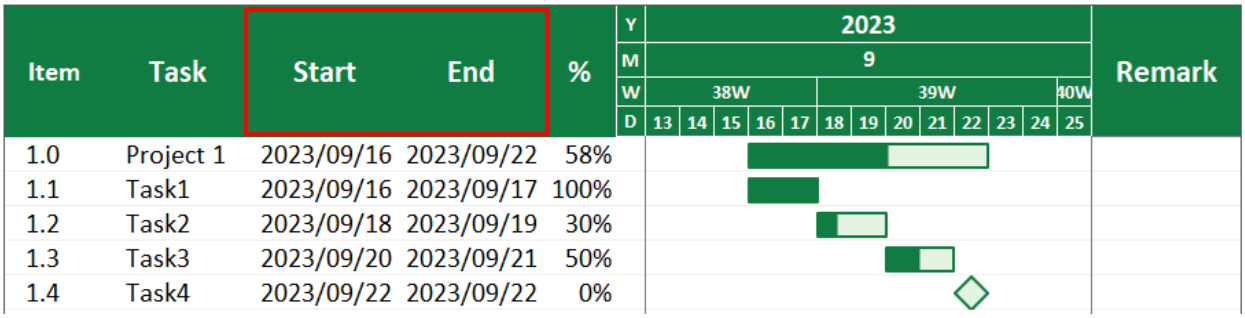
Then the headings shows up, you will see there are many grouping columns there.



Let's open them and see what fields we have.



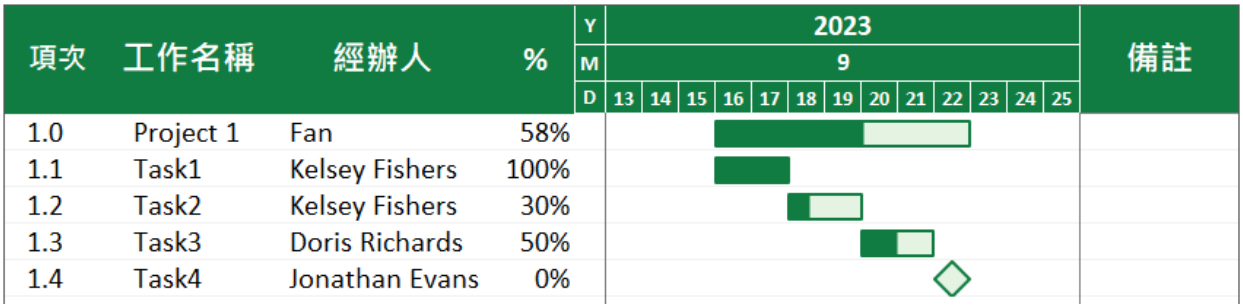
We are going to leave this part for users to decide what they need for their report.
Users can hide or group relevant columns for their needs. The photo below is an example of adding the fields '**Start**' and '**End**' in our Gantt chart.



Item	Task	Start	End	%	Remark
1.0	Project 1	2023/09/16	2023/09/22	58%	
1.1	Task1	2023/09/16	2023/09/17	100%	
1.2	Task2	2023/09/18	2023/09/19	30%	
1.3	Task3	2023/09/20	2023/09/21	50%	
1.4	Task4	2023/09/22	2023/09/22	0%	

Change language and format cell

Because we don't set up any protection for the sheet("**Gantt chart**"), users can change anything they want in cells. For example, you can change the language of the headers in Chinese in the Gantt chart, as in the photo below.

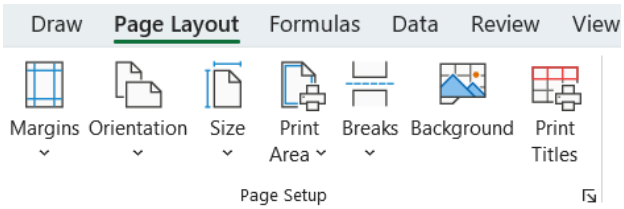


項次	工作名稱	經辦人	%	備註
1.0	Project 1	Fan	58%	
1.1	Task1	Kelsey Fishers	100%	
1.2	Task2	Kelsey Fishers	30%	
1.3	Task3	Doris Richards	50%	
1.4	Task4	Jonathan Evans	0%	

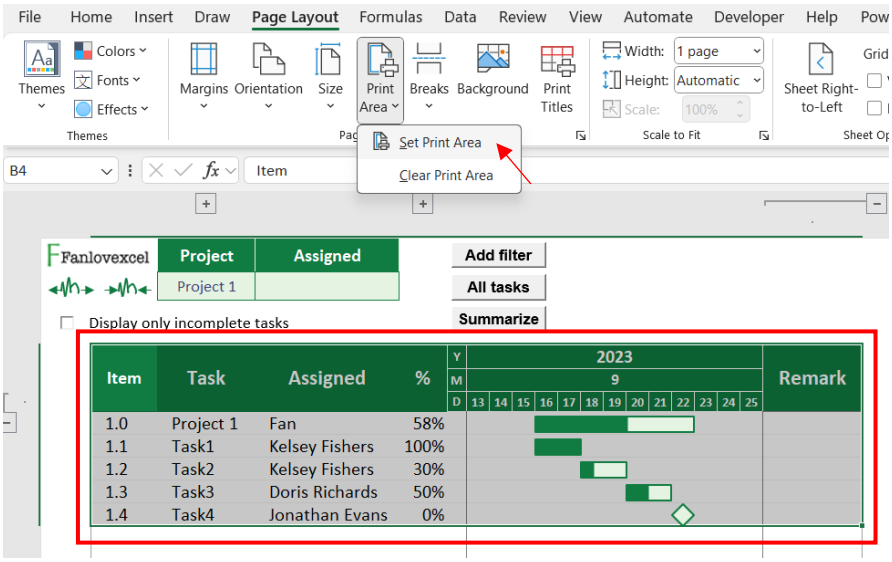
Or users can adjust the text size and color.

Print Gantt chart

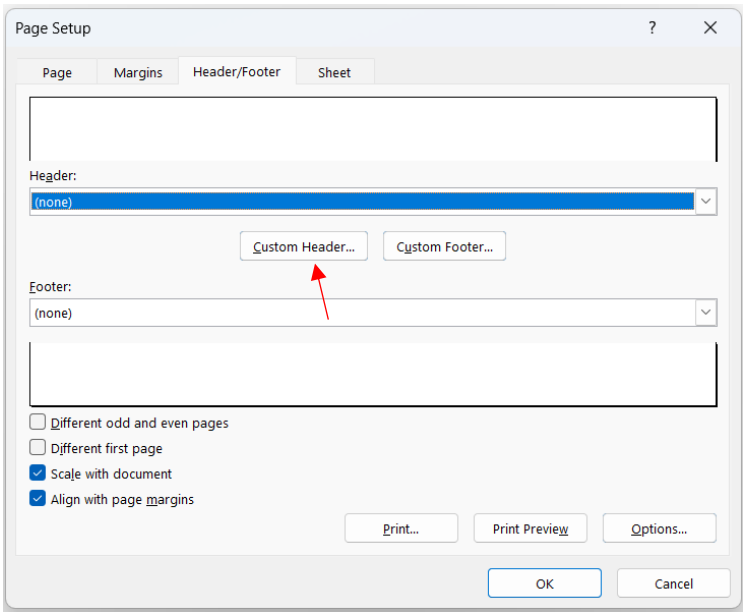
In Excel, it already has functions for users to print out the report, as in the photo below.



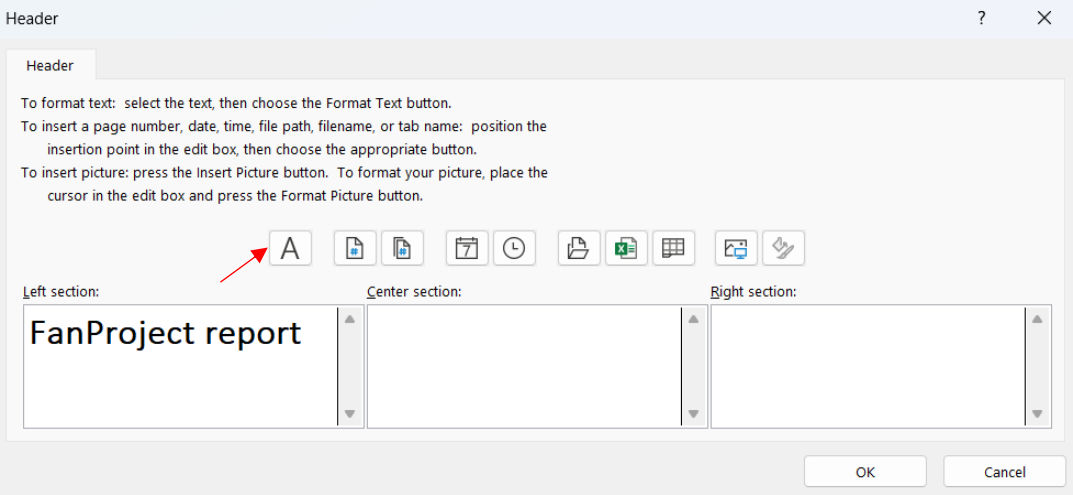
For example, if you want to print the area of project 1, you can first select this area then go to tab Page Layout -> Print Area -> Set Print Area, as in the photo below.



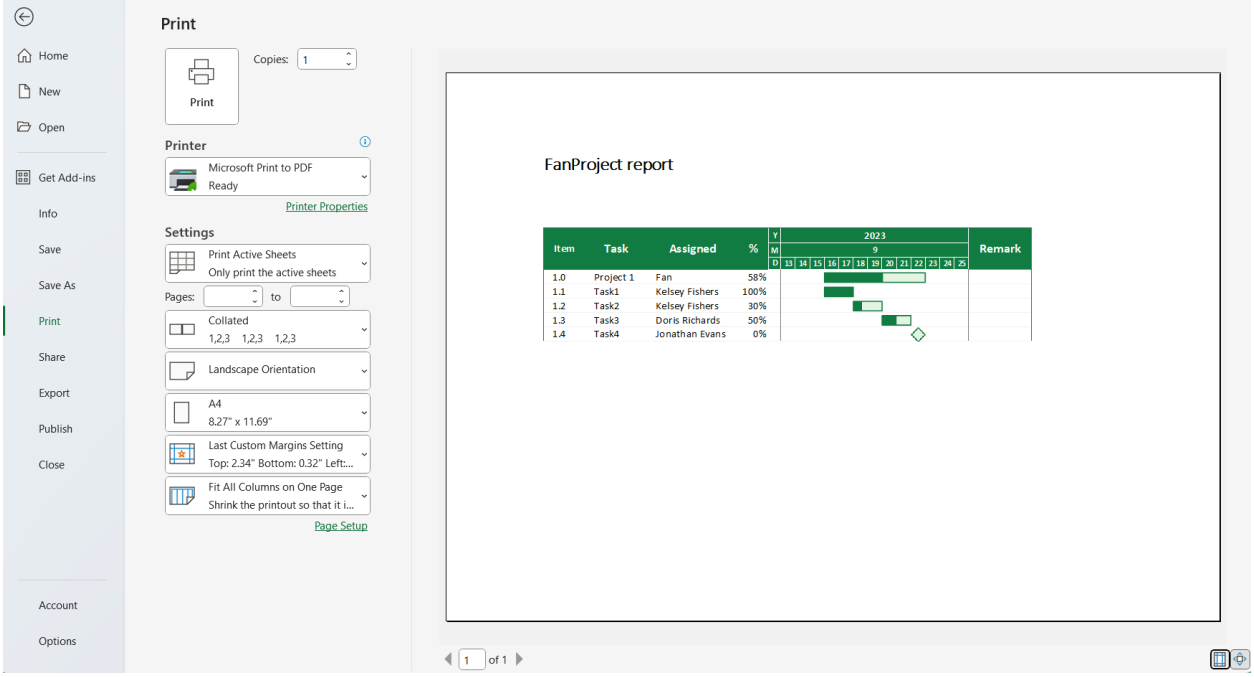
We can also add a header for this report. Go to tab Page Layout -> Print Titles -> Header/Footer.



Enter what header you like in the blocks and adjust its format.



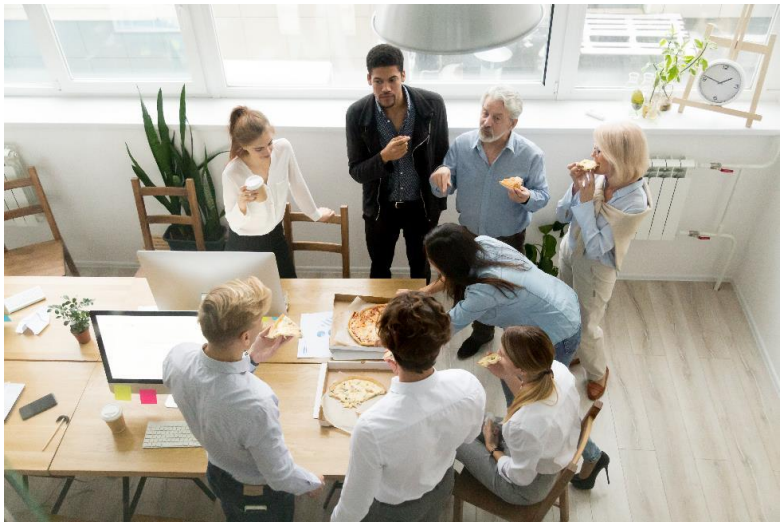
Then go to tab File -> Print, to print your report.



Chapter 10 Manage Project Budget

It would be wonderful if we could manage the project budget directly in our Gantt chart model. Yes, we have it, but there are a thousand ways to manage the budget depending on your needs or your company's culture. Therefore, we just make an example to show you how to leverage this model to manage the project budget.

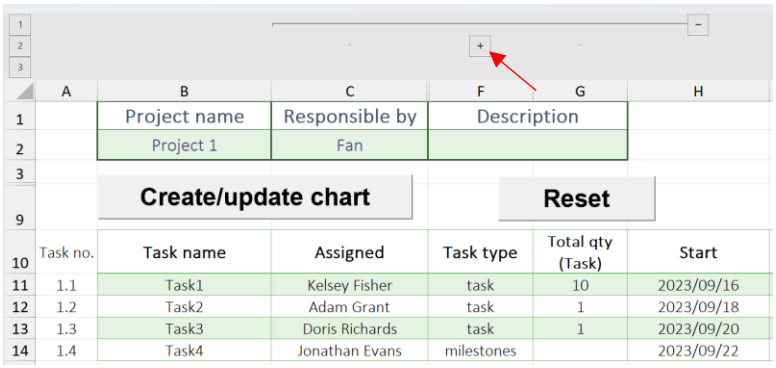
Firstly, let's think about what does budget means in a project. In a project, there are many kind of costs from resources that you would spend on. For example, if you hold a meeting, you may need to rent a meeting room and prepare food. The money you are planning to pay is your budget. And a meeting room is the resource you need.



In a data model of view, the relationship between budget items and a task is a multiple to one relationship. For example, there might be one or more budget items for one task. Therefore, you shall not directly enter the budget in the data table of Gantt chart. On the contrary, you should

create a data table of budget separately. Then in the data table of Gantt chart, we can write a formula to group by/ summarize the budget for each task from the data table of budget.

In the data table of Gantt chart, there are two grouping columns by default. Let's open them by clicking the icon, as in the photo below.



	A	B	C	F	G	H
1		Project name	Responsible by	Description		
2		Project 1	Fan			
3						
9		Create/update chart		Reset		
10	Task no.	Task name	Assigned	Task type	Total qty (Task)	Start
11	1.1	Task1	Kelsey Fisher	task	10	2023/09/16
12	1.2	Task2	Adam Grant	task	1	2023/09/18
13	1.3	Task3	Doris Richards	task	1	2023/09/20
14	1.4	Task4	Jonathan Evans	milestones		2023/09/22

Then you will see the two fields '**Customized 1**' and '**Customized 2**' showing up.

	A	B	C	D	E	F
1		Project name	Responsible by			Descrip
2		Project 1	Fan			
3						
9		Create/update chart		Reset		
10	Task no.	Task name	Assigned	Customized 1	Customized 2	Task type
11	1.1	Task1	Kelsey Fisher			task
12	1.2	Task2	Adam Grant			task
13	1.3	Task3	Doris Richards			task
14	1.4	Task4	Jonathan Evans			milestones

In the following content, we will use the sheet("**Sample**") to show you how to manage your project budget by leveraging these two fields plus the sheet("**For User**").

The photo below is the data table of budget we made for this example on the sheet("**For User**"). You will see this table if you purchase the Standard version of our product.
You can see there are two budget items for **Task16** which the total budget is 200 + 130 = 330 dollars.

	A	B	C	D	E	F	G	H	I
1	**Example: Budget table**								
2									
3	**Project name**	**Task name**	**Assigned**	**Resource category**	**Resource name**	**Unit**	**Qty**	**Unit price**	**Budget**
4	Sample	Task1	Kelsey Fisher	Transportation	taxi	usd/one way	2	50	$ 100
5	Sample	Task4	Kelsey Fisher	Room	meeting room	usd/4hr	1	300	$ 300
6	Sample	Task7	Adam Grant	Tools	special tools	usd/day	2	125	$ 250
7	Sample	Task12	Doris Richards	Outsourcing	marketing	usd/task	1	500	$ 500
8	Sample	Task16	Jonathan Evans	Human resource	Kelsey Fisher	usd/hr	4	50	$ 200
9	Sample	Task16	Jonathan Evans	Human resource	Doris Richards	usd/hr	2	65	$ 130
10	**Total**								**$ 1,480**

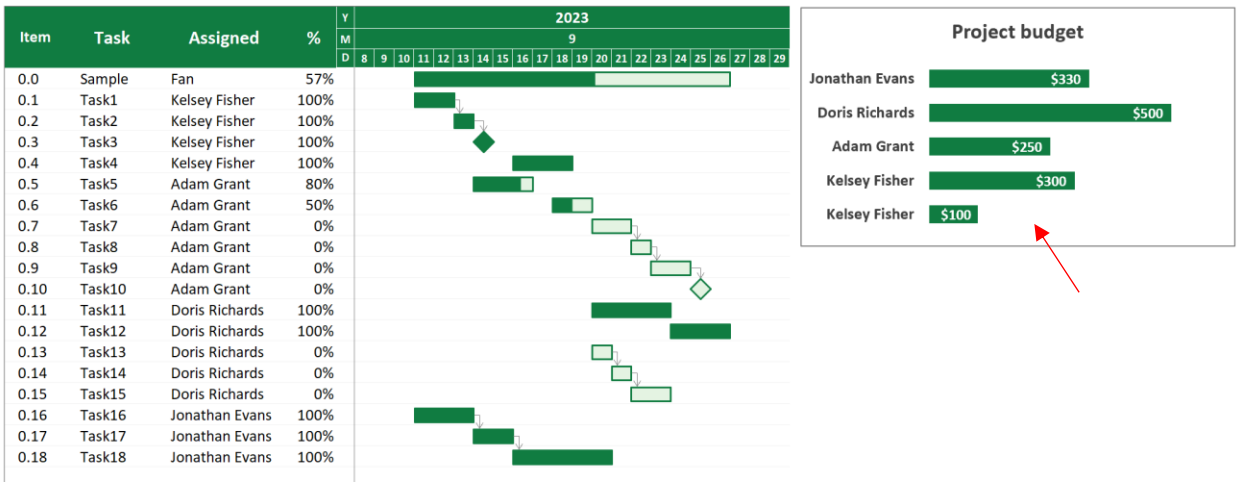
Because we will group by/ summarize the budget items into the data table of Gantt chart afterward, be careful you use the complete same name in the fields '**Project name**', '**Task name**' and '**Assigned**' in this budget table.

Go back to our sample data table, as in the photo below. In the **Task 16** row, the field '**Customized 1 (Resources)**' automatically join the names of resource name, and the field '**Customized 2 (Budget)**' already summarized the budget from the budget table.

Task name	Assigned	Customized 1 (Resources)	Customized 2 (Budget)	Task type
Task1	Kelsey Fisher	taxi	$ 100	task
Task2	Kelsey Fisher			task
Task3	Kelsey Fisher			milestones
Task4	Kelsey Fisher	meeting room	$ 300	task
Task5	Adam Grant			task
Task6	Adam Grant			task
Task7	Adam Grant	special tools	$ 250	task
Task8	Adam Grant			task
Task9	Adam Grant			task
Task10	Adam Grant			milestones
Task11	Doris Richards			task
Task12	Doris Richards	marketing	$ 500	task
Task13	Doris Richards			task
Task14	Doris Richards			task
Task15	Doris Richards			task
Task16	Jonathan Evans	Kelsey Fisher, Doris Richards	$ 330	task
Task17	Jonathan Evans			task
Task18	Jonathan Evans			task

By the way, we use TEXTJOIN function in the field '**Customized 1 (Resources)**' and SUM(FILTER(....)) function in the field '**Customized 2 (Budget)**'. However, you can create your formula by yourself.

You can also create a budget chart and put it next to the Gantt chart, as in the photo below.



For further development of creating charts or managing the budget, please contact us. We will answer your questions or provide a quote for you.