

Gantt charts are graphical representations of task-based projects.

The tasks in a Gantt chart are both listed in a tabular format and displayed graphically as task bars, reflecting their duration. By linking related tasks, Visio can automatically adjust the timeline when tasks are delayed or completed before schedule.

Hence, Gantt charts are the ideal tool to use if you are responsible for scheduling a project and tracking the duration of each of the tasks in the project to ensure the project is completed on time.

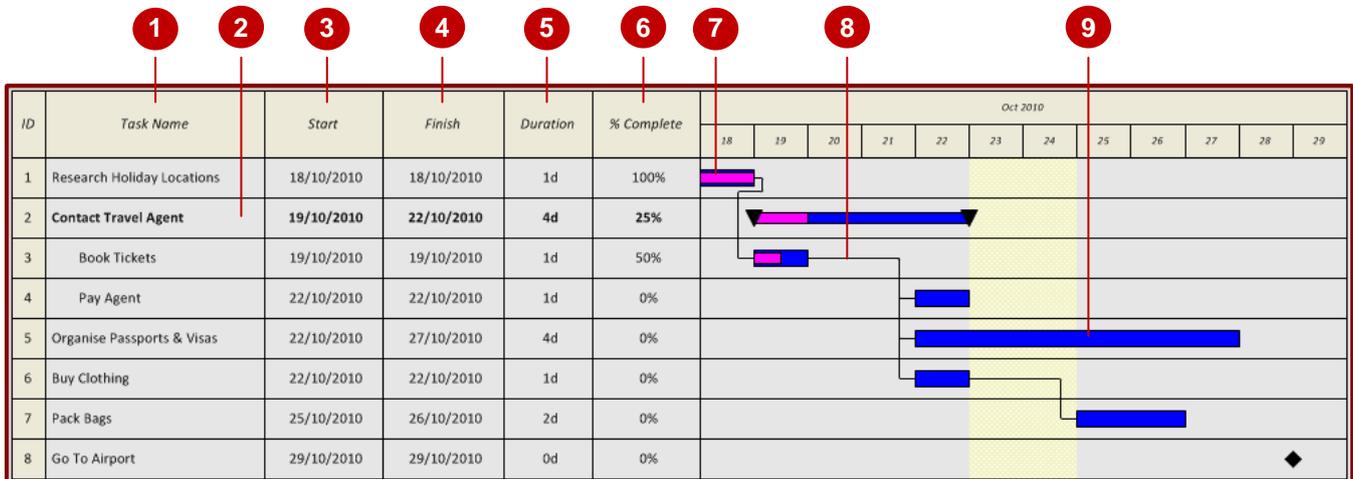
In this session you will:

- ✓ gain an understanding of **Gantt** charts
- ✓ gain an understanding of **Gantt** chart options
- ✓ learn how to create a **Gantt** chart
- ✓ learn how to complete task details
- ✓ learn how to create subtasks
- ✓ learn how to link and unlink tasks
- ✓ learn how to add and delete tasks
- ✓ learn how to display and hide columns
- ✓ learn how to format task bars
- ✓ learn how to navigate a **Gantt** chart
- ✓ learn how to export **Gantt** chart data
- ✓ learn how to import data into a **Gantt** chart
- ✓ learn how to print **Gantt** charts.

UNDERSTANDING GANTT CHARTS

Projects usually comprise multiple tasks. When you manage a project it can be difficult to track the tasks, their relationships, duration and status. A change in one task can affect the progression

of a project and it is therefore important to have an overview of that project. **Gantt charts** are bar charts that depict activities in a project, their duration and their interrelationships.

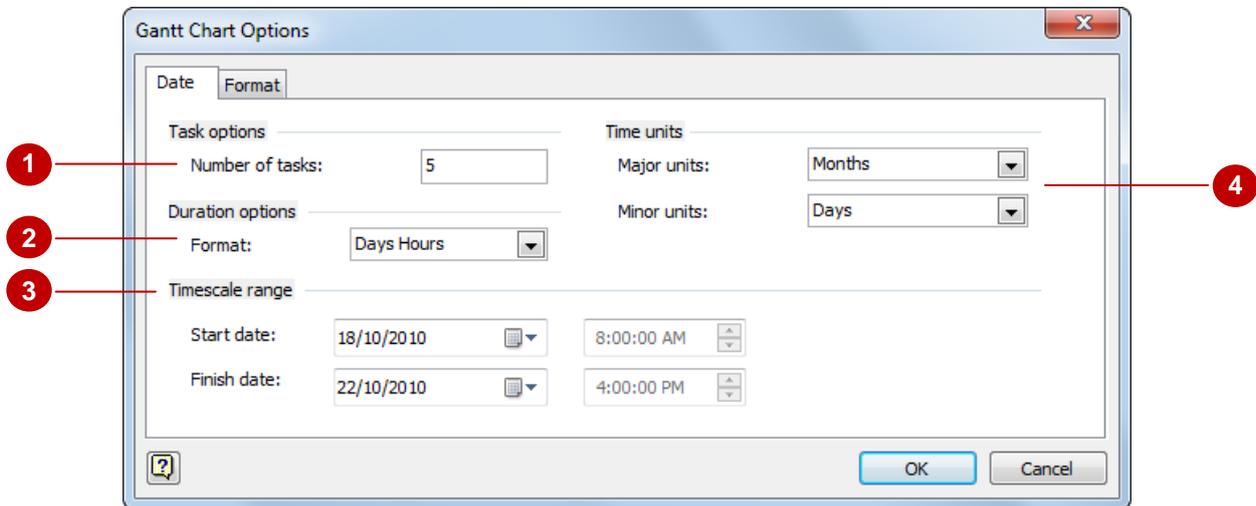


1	The individual tasks are listed in the Task Name column.
2	A task is automatically formatted as bold when a task below it is indented. The bolding indicates that the task is a summary task and the indented tasks below it are subtasks of the summary task. Note that you cannot edit the duration of a summary task, only its subtasks.
3	The Start date determines the start position of the task bar.
4	The Finish date determines the end position of the task bar.
5	The Duration of a task determines the length of the task bar. You can either enter the Duration or let Visio calculate it by typing a Start and Finish date. Type the Duration as a number followed by w for weeks, d for days, h for hours, or m for minutes (for example, 3d for 3 days). A task with a duration value of zero is a milestone (see task 8 Go to Airport above).
6	The % Complete indicates the progress of a task. The value is highlighted in the task bar to give additional graphical information. This column may not be showing by default, but can be added in manually.
7	The percentage complete is reflected in the task bar by a proportion of the task bar appearing in a different colour, see tasks 1 and 2 above.
8	Linked tasks are connected by connector lines . By connecting tasks, if the end date of one task changes, the connected tasks will automatically adjust to reflect the impact on the progress of the project.
9	Each task is represented graphically by a task bar. This makes it much easier to gauge the progress of a project.

GANTT CHART OPTIONS

When you are creating a new Gantt chart, there are a number of **options** that you need to select to determine the level of detail in the resulting chart. These options control the size of the chart,

duration, duration format and the date range. While they can be changed after you have created the chart, you will finish your chart much earlier if you plan the layout first.



- 1 The **Number of tasks** option is only available when you are first creating a Gantt chart. Once this dialog box has been activated and the Gantt chart created, you cannot create additional tasks by using this option. Instead, you must either click on **New**  or drag the **Row** shape from the **Shapes** window to add extra tasks.
- 2 The **Format** determines the way in which the values will display in the **Duration** column of the Gantt chart. Durations are displayed as **w** for **weeks**, **d** for **days**, **h** for **hours**, and **m** for **minutes** (preceded by the number of those units).
- 3 The **Timescale range** determines the period of time displayed in the Gantt chart. The **start time** and **finish time** fields are only available if **Hours** has been selected in **Minor units**.
- 4 The **Time units** determine the level of detail where the task bars are displayed on the Gantt chart. In the Gantt chart, there are two levels of headings where the task bars are displayed. The top heading is determined by the **Major units** selected in the dialog box and the lower headings are determined by the **Minor units** selected.

CREATING A GANTT CHART

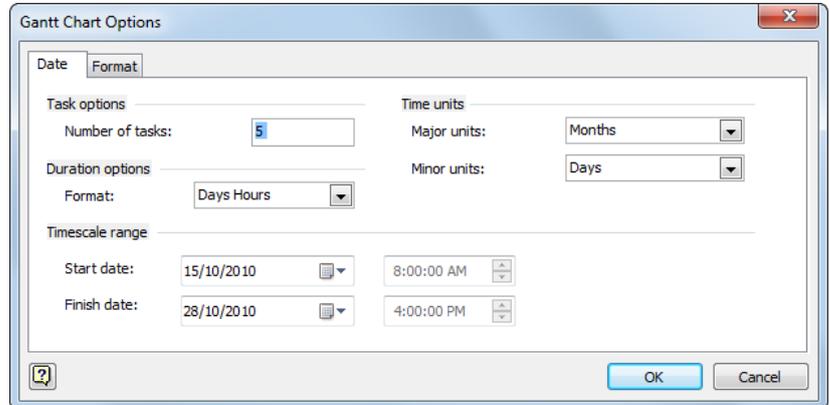
Visio includes a **Gantt Chart template** that enables you to create a visual representation of the activities in a project along with their duration. Because tasks can be linked to each other, the

Gantt chart will automatically adjust if any tasks are delayed. You can then see the impact on the overall finish date of the project and take appropriate action if necessary.

Try This Yourself:

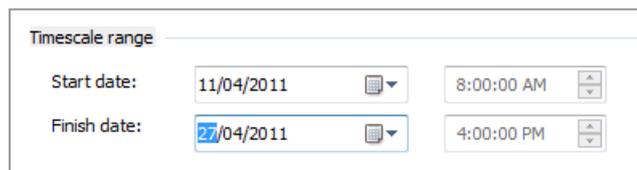
Before starting this exercise ensure no files are open in Visio...

- 1 Click on the **File** tab, click on **Schedule** under **Template Categories**, click on **Gantt Chart** and then click on **[Create]**
The **Gantt Chart Options** dialog box will open letting you set the basic setup options for your chart. These options can be altered later...
- 2 Type **7** in **Number of tasks**
The duration of the project will be a couple of weeks so you won't need to change the default settings in **Duration options** and **Time units**. But let's assume the project will start next April...
- 3 Click on the drop arrow for **Start date** in **Timescale range** to display a calendar for the current month
- 4 Click on the right arrow  until **April** next year appears
- 5 Click on a Monday
- 6 Repeat steps **3** and **5** to change **Finish date** to the Wednesday two-and-a half weeks later
- 7 Click on **[OK]** to create the Gantt chart



1

6



ID	Task Name	Start	Finish	Duration	
1	Task 1	11/04/2011	11/04/2011	1d	
2	Task 2	11/04/2011	11/04/2011	1d	
3	Task 3	11/04/2011	11/04/2011	1d	
4	Task 4	11/04/2011	11/04/2011	1d	
5	Task 5	11/04/2011	11/04/2011	1d	
6	Task 6	11/04/2011	11/04/2011	1d	
7	Task 7	11/04/2011	11/04/2011	1d	

7

For Your Reference...

To **create** a new **Gantt chart**:

1. Select **File > New > Schedule > Gantt Chart**
2. Select the required options
3. Click on **[OK]**

Handy to Know...

- If you need to change the start or finish date of the project detailed in a Gantt chart, open the **Gantt Chart Options** dialog box by clicking on **Chart Options**  in the **Manage** group on the **Gantt Chart** tab.

COMPLETING TASK DETAILS

When you create a new Gantt chart using the **Gantt Chart Options** dialog box, Visio displays the specified number of tasks each with a default name, start date and duration. You can quickly

name each task, adjust their individual start and finish dates, and indicate the expected duration for each task. The task bars in the chart will update to reflect your changes.

Try This Yourself:

Same File

Continue using the previous file or open V515 Gantt Charts_1.vsd...

1 Zoom to **100%**, then click on **Task 1** in the **Task Name** column to select it

2 Type **Research Holiday Locations**, then click on the **Finish** date for this task

As the Start date for the first task is the date when the project starts, you won't need to change it...

3 Type a date two days after the **Start** date (we've typed **13/04/11** in our sample), then click on the **Duration** for this task

The Duration will calculate automatically from the Start and Finish dates and the task bar will extend to 3 days...

4 Complete the project details as shown including **Task Names**, and appropriate **Start** dates and **Finish** dates

The task bars will appear in your chart based on the dates and durations you specify

1

ID	Task Name	Start	Finish	Duration
1	Task 1	11/04/2011	11/04/2011	1d
2	Task 2	11/04/2011	11/04/2011	1d
3	Task 3	11/04/2011	11/04/2011	1d

2

ID	Task Name	Start	Finish	Duration
1	Research Holiday Locations	11/04/2011	11/04/2011	1d
2	Task 2	11/04/2011	11/04/2011	1d
3	Task 3	11/04/2011	11/04/2011	1d

3

ID	Task Name	Start	Finish	Duration
1	Research Holiday Locations	11/04/2011	13/04/2011	3d
2	Task 2	11/04/2011	11/04/2011	1d
3	Task 3	11/04/2011	11/04/2011	1d

4

ID	Task Name	Start	Finish	Duration
1	Research Holiday Locations	11/04/2011	13/04/2011	3d
2	Contact Travel Agent	14/04/2011	15/04/2011	2d
3	Book Tickets	14/04/2011	14/04/2011	1d
4	Pay Agent	18/04/2011	18/04/2011	1d
5	Organise Passport & Visas	18/04/2011	21/04/2011	4d
6	Buy Clothing	18/04/2011	18/04/2011	1d
7	Pack Bag	20/04/2011	21/04/2011	2d

For Your Reference...

To **complete task details**:

1. Click on the task field to be edited
2. Type the required value

Handy to Know...

- If you know the duration of a task, you can either type a value in **Duration** or drag the blue handle on the task bar to the desired date. Visio will calculate the **Finish** date.
- To create a **Milestone**, or key date in a project, add a task with a **Duration** of zero.

CREATING SUBTASKS

If you have a task in a project that comprises a number of other tasks, then you can break down the 'parent' task into **subtasks** and thereby track each individual aspect of the parent task. When

you identify a task as being a subtask, the parent task is referred to as a **summary task** and it is formatted bold in the Gantt chart to indicate its status. The summary task and subtasks are linked.

Try This Yourself:

Same File

Continue using the previous file or open the file V515 Gantt Charts_2.vsd...

- 1 Click on the **Gantt Chart** tab to open it

This contextual tab contains all commands pertinent to Gantt charts...

- 2 Click on the **Book Tickets** task to select it

You can select multiple tasks, if desired, by pressing **Shift** and clicking on each task...

- 3 Click on **Indent**  in the **Tasks** group

The task will be demoted (indented) to a subtask. The task immediately above the subtask will be bolded as Visio assumes this is the summary task...

- 4 Repeat step 3 to indent the **Pay Agent** task

Both of these tasks are now subtasks of the **Contact Travel Agent** task.

The formatting of the summary task's task bar will change to include triangle symbols at the start and end of the bar

2

ID	Task Name	Start	Finish
1	Research Holiday Locations	11/04/2011	13/04/2011
2	Contact Travel Agent	14/04/2011	15/04/2011
3	Book Tickets	14/04/2011	14/04/2011
4	Pay Agent	18/04/2011	18/04/2011
5	Organise Passport & Visas	18/04/2011	21/04/2011
6	Buy Clothing	18/04/2011	18/04/2011
7	Pack Bag	20/04/2011	21/04/2011

3

ID	Task Name	Start	Finish
1	Research Holiday Locations	11/04/2011	13/04/2011
2	Contact Travel Agent	14/04/2011	14/04/2011
3	Book Tickets	14/04/2011	14/04/2011
4	Pay Agent	18/04/2011	18/04/2011
5	Organise Passport & Visas	18/04/2011	21/04/2011
6	Buy Clothing	18/04/2011	18/04/2011
7	Pack Bag	20/04/2011	21/04/2011

4

Duration	Apr 2011												
	11	12	13	14	15	16	17	18	19	20	21	22	23
3d	█												
3d		█											
1d			█										
1d							█						
4d							█						
1d							█						
2d									█				

For Your Reference...

To **create subtasks**:

1. Select the task/s to demote
2. Click on **Indent**  in the **Tasks** group on the **Gantt Chart** tab

Handy to Know...

- If you want to remove the subtask property from a task, select the task/s and click on **Outdent** .
- The subtasks determine the **Duration** of the summary task. As a result of this, you cannot alter the **Duration** of a summary task (hence the bold formatting), only its subtasks.

LINKING AND UNLINKING TASKS

You can illustrate a relationship between tasks by **linking** them. For instance, you would link tasks where one must be finished before the next task can start. By linking tasks, any change in a task's

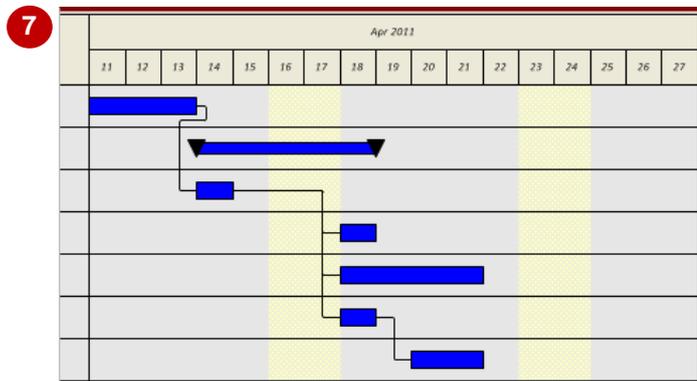
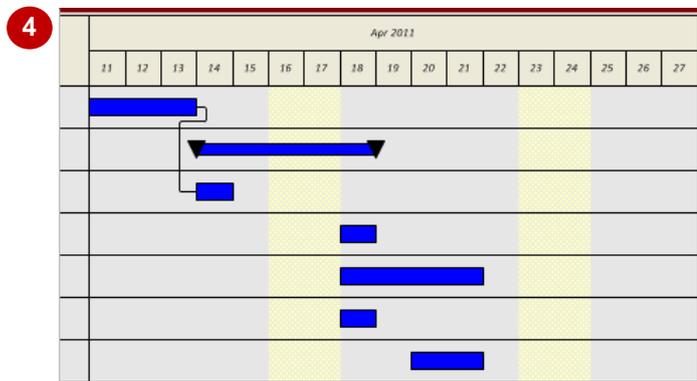
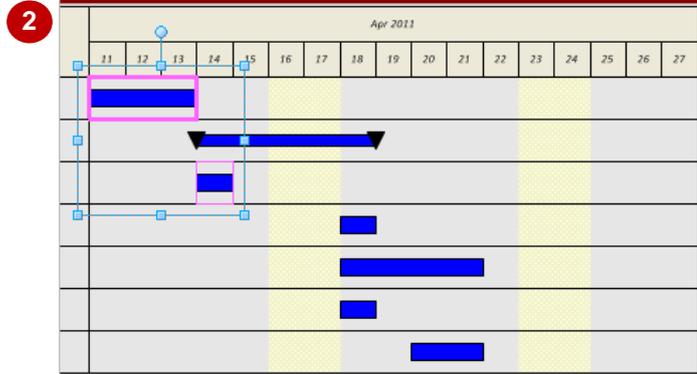
start and finish details will automatically affect the start and finish details of all tasks that are subsequently linked. In a cascading effect, this may ultimately affect the completion date of the project.

Try This Yourself:

Same
File

Continue using the previous file or open the file V515 Gantt Charts_3.vsd...

- 1 Click on the first task bar in the Gantt chart to select it
- 2 Press **Shift** and click on the **Book Tickets** task bar
You cannot book the tickets before you've decided where to go for your holiday...
- 3 Click on **Link**  in the **Tasks** group
- 4 Press **Esc** to see the link more clearly
A connector will be drawn between the two linked tasks...
- 5 Select the two task bars again
Unlinking tasks is also a simple process...
- 6 Click on **Unlink**  to remove the link
The link will now disappear...
- 7 Complete the links as shown
Note that you will have to link Book Tickets to each of the three tasks on April 18th individually



For Your Reference...

To **link** tasks:

1. Select the tasks
2. Click on **Link** 

To **unlink** tasks:

1. Select the tasks
2. Click on **Unlink** 

Handy to Know...

- By default, links are drawn in an 'S' shape. These are referred to as **S type connectors**. You can change the style of the connectors. Right-click on a blank area of the page and select **S Type Connectors** to remove the tick. The connectors will appear as 'L' shaped links.

ADDING AND DELETING TASKS

When you first activate the Gantt chart template, you are asked to indicate the number of tasks you require. Obviously this can be very difficult to get exactly right before you start entering the

tasks. However, you are able to add and delete tasks at any time by using the commands on the **Gantt Chart** ribbon tab or the shapes provided in the **Gantt Chart Shapes** stencil.

Try This Yourself:

Same File

Continue using the previous file or open V515 Gantt Charts_4.vsd...

1 Click on the **Pack Bag** task, then click on **New**  in the **Tasks** group to insert a new task above this task

2 Type **Go to Airport**, then add a **Start** date five days after the **Finish** date for **Pack Bag** and a **Duration** of **0d**

This task should be the last one...

3 Click on the **Go to Airport** task, then drag it below the **Pack Bag** task

You can add a new task by adding a Row shape...

4 Drag the **Row** shape onto the bottom of the last row of the Gantt chart

If you drop the Row shape on top of another row, it will be inserted above it. By moving the pointer to below the last row, the new row will be inserted below it...

5 Release the mouse to add a new row

6 With the new row still selected, press **Del** to delete it – you should now have 8 rows in total

5	Organise Passport & Visas	18/04/2011	21/04/2011	4d	
6	Buy Clothing	18/04/2011	18/04/2011	1d	
7					
8	Pack Bag	20/04/2011	21/04/2011	2d	

1

5	Organise Passport & Visas	18/04/2011	21/04/2011	4d	
6	Buy Clothing	18/04/2011	18/04/2011	1d	
7	Go to Airport	26/04/2011	26/04/2011	0d	
8	Pack Bag	20/04/2011	21/04/2011	2d	

2

5	Organise Passport & Visas	18/04/2011	21/04/2011	4d	
6	Buy Clothing	18/04/2011	18/04/2011	1d	
7	Pack Bag	20/04/2011	21/04/2011	2d	
8	Go to Airport	26/04/2011	26/04/2011	0d	

3

6	Buy Clothing	18/04/2011	18/04/2011	1d	
7	Pack Bag	20/04/2011	21/04/2011	2d	
8	Go to Airport	26/04/2011	26/04/2011	0d	

4

6	Buy Clothing	18/04/2011	18/04/2011	1d	
7	Pack Bag	20/04/2011	21/04/2011	2d	
8	Go to Airport	26/04/2011	26/04/2011	0d	
9					

5

For Your Reference...

To **add** a **new task**:

1. Click on **New**  in the **Tasks** group on the **Gantt Chart** tab or drag the **Row** shape either onto or slightly below a task

To **delete** a **task**:

1. Click on the task name and press **Del** 

Handy to Know...

- You can add extra tasks to the bottom of a Gantt chart by clicking on the edge of the chart and dragging down the bottom selection handle. Visio will automatically add new tasks to occupy the additional space.
- You can delete a selected task by clicking on **Delete**  in the **Tasks** group.

ADDING AND HIDING COLUMNS

When you create a new Gantt chart, four columns will display by default. These are **Task Name**, **Start**, **Finish** and **Duration**. If required, you can display additional predefined columns

such as **% Complete**, **Actual Duration** or **Resource Names**. You can also display user-defined columns such as number, text or time columns.

Try This Yourself:

Same File

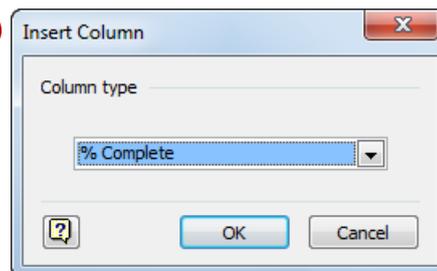
Continue using the previous file or open V515 Gantt Charts_5.vsd...

- 1 Click on the **Duration** column heading
You must select a column before you can add a new one. The new column will be inserted to the right of the selected one...
- 2 Click on **Insert**  in the **Columns** group to open the **Insert Column** dialog box
- 3 Click on **[OK]** to insert the **% Complete** column
You can also add a column using a shape...
- 4 Drag the **Column** shape on top of the **% Complete** column
- 5 Release the mouse to open the **Insert Column** dialog box
- 6 Click on the drop arrow  for **Column type** and click on **Resource Names**, then click on **[OK]** to insert the column
- 7 Click on the **Resource Names** column heading and press **[Del]** to remove the column from the Gantt chart

ID	Task Name	Start	Finish	Duration	11	12	13	14	15
1	Research Holiday Locations	11/04/2011	13/04/2011	3d					
2	Contact Travel Agent	14/04/2011	18/04/2011	3d					
3	Book Tickets	14/04/2011	14/04/2011	1d					
4	Pay Agent	18/04/2011	18/04/2011	1d					
5	Organise Passport & Visas	18/04/2011	21/04/2011	4d					
6	Buy Clothing	18/04/2011	18/04/2011	1d					
7	Pack Bag	20/04/2011	21/04/2011	2d					
8	Go to Airport	26/04/2011	26/04/2011	0d					

1

2



3

ID	Task Name	Start	Finish	Duration	% Complete	11
1	Research Holiday Locations	11/04/2011	13/04/2011	3d	0%	
2	Contact Travel Agent	14/04/2011	18/04/2011	3d	0%	
3	Book Tickets	14/04/2011	14/04/2011	1d	0%	
4	Pay Agent	18/04/2011	18/04/2011	1d	0%	
5	Organise Passport & Visas	18/04/2011	21/04/2011	4d	0%	
6	Buy Clothing	18/04/2011	18/04/2011	1d	0%	
7	Pack Bag	20/04/2011	21/04/2011	2d	0%	
8	Go to Airport	26/04/2011	26/04/2011	0d	0%	

For Your Reference...

To **add** a **column**:

1. Click on a column heading
2. Click on **Insert**  in the **Columns** group

To **hide** a **column**:

1. Select the column heading
2. Press **[Del]** or click on **Hide** 

Handy to Know...

- When you press **[Del]** to delete a column, you are actually just hiding it. If you display the column again, any data that you previously added to it will still appear in the column.

FORMATTING TASK BARS

There are a number of different formats that you can apply to the task bars to customise them. You can change the colours of the task bars, apply a shape to the starts and ends of the task

bars, and choose to include labels with the task bars (labels can make task bars more informative at a glance). You can also apply formatting to the milestones and summary bars.

Try This Yourself:

Same File

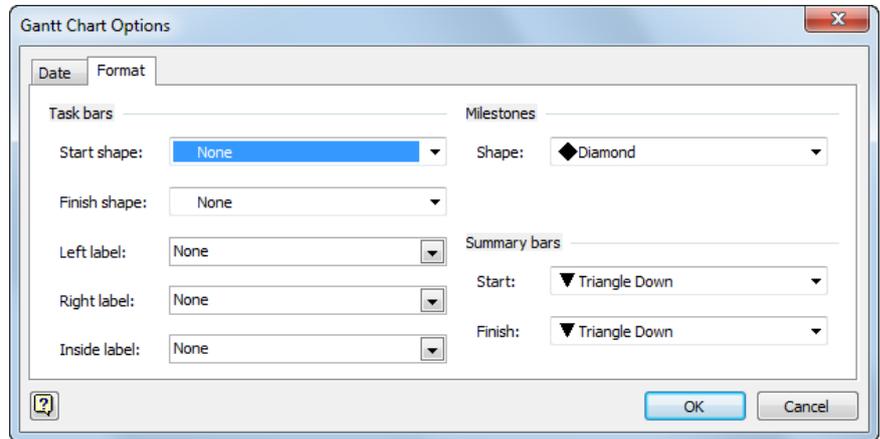
Continue using the previous file or open the file *V515 Gantt Charts_6.vsd...*

- 1 Click on **Chart Options**  in the **Manage** group to open the **Gantt Chart Options** dialog box, then click on the **Format** tab

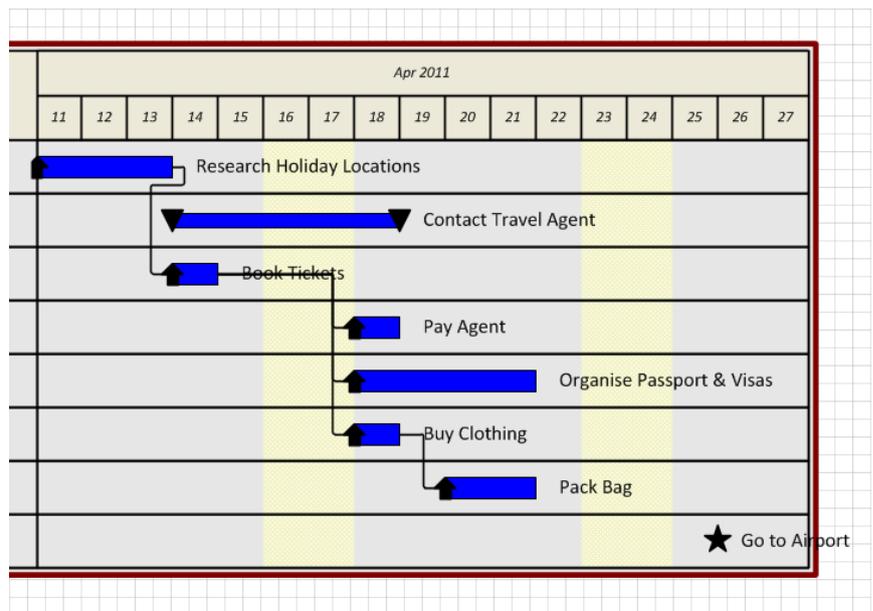
These formatting options apply to the task bars, summary bars and milestones...

- 2 Click on the drop arrow  for **Start shape** under **Task bars** and click on **Arrow Up**
- 3 Click on the drop arrow  for **Right label** and click on **Task Name**
- 4 Click on the drop arrow  for **Shape** under **Milestones** and click on **Star**
- 5 Click on [OK] to apply the changes

You might need to zoom in to see the changes



1



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For Your Reference...

To **format task bars**:

1. Click on **Chart Options** 
2. Click on the **Format** tab
3. Select the required options
4. Click on [OK]

Handy to Know...

- To change the fill colour of a selected task bar (or a summary bar or milestone), click on **Fill**  in the **Shape** group on the **Home** tab and click on the desired colour.
- You can specify the formatting options when you first create a Gantt chart if you know what options you want to use.

EXPORTING FROM A GANTT CHART

The ability to exchange data between Microsoft Visio and other applications is a valuable tool. You can export information from a Visio Gantt chart in a format compatible with Microsoft Excel

or with other project management tools, such as Microsoft Project, enabling you to analyse and report on the information more thoroughly.

Try This Yourself:

Same File

Continue using the previous file or open the file *V515 Gantt Charts_8.vsd...*

1

Click on the border of the Gantt chart to select it

If you don't select the chart before the next step, Visio will automatically select it and display a message asking you whether or not you want to export it...

2

Click on **Export Data**  in the **Manage** group to open the **Export Project Data Wizard**

You will now be led through a step-by-step process to export the data...

3

Click on **Text File** in **Export my project data into...** then click on **[Next]**

4

Click on **[Browse]**, then select the course files folder as the location in which to save the file

5

Type **Holiday Project** in **File name**, then click on **[Save]**

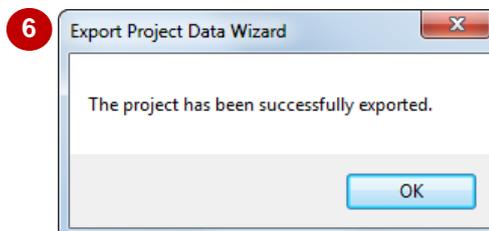
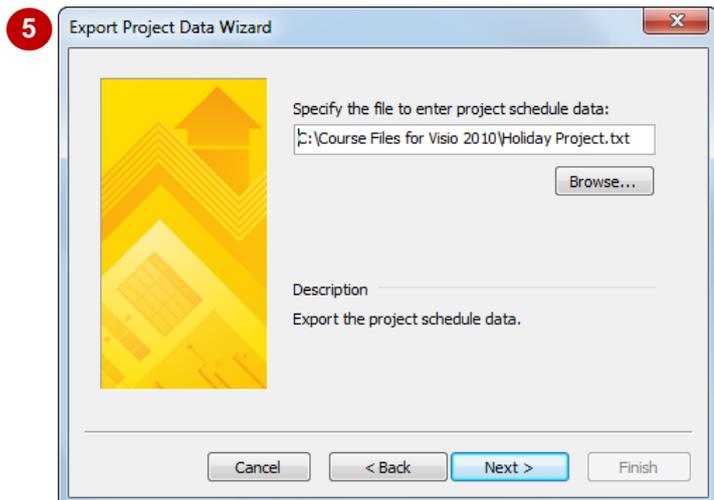
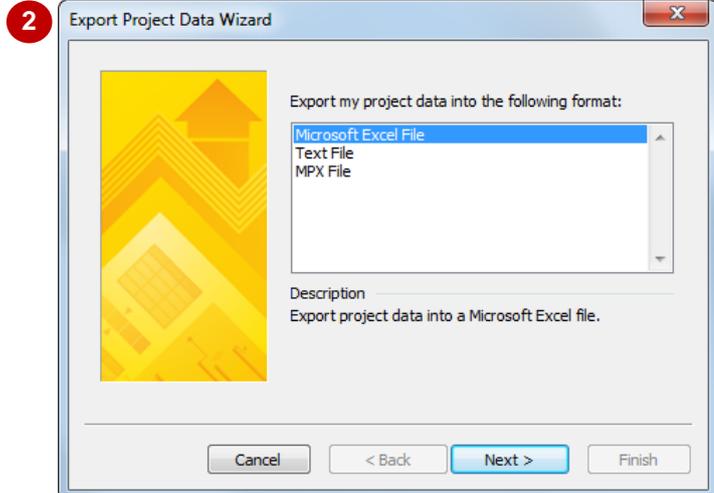
6

Click on **[Next]**, then click on **[Finish]**

You will be notified if the export is successful...

7

Click on **[OK]**



For Your Reference...

To **export data**:

1. Click on **Export Data**  in the **Manage** group on the **Gantt Chart** tab
2. Select the data format
3. Browse to the desired folder location, type a file name and click on **[Save]**

Handy to Know...

- To export data from a Gantt chart directly to Microsoft Project, you must have Microsoft Project installed on your computer.
- Microsoft uses the same terminology in Visio as it does in Project making it easy for users to move between the two applications.

IMPORTING DATA INTO A GANTT CHART

If you have data relating to a project stored in another application but would like to create a presentation of that data using Visio, then you are able to do this by importing the data. The

Import Project Data Wizard is designed to take data from files created in other applications and convert it into a drawing such as a Gantt chart or timeline.

Try This Yourself:

Before starting this exercise ensure no files are open in Visio...

- 1 Select **File > New > Schedule > Gantt Chart**, then click on **[Create]** and then on **[Cancel]** to close the **Gantt Chart Options** dialog box

This will open a blank drawing based on the Gantt Chart template...

- 2 Click on the **Gantt Chart** tab, then click on **Import Data**  to open the **Import Project Data Wizard** dialog box

- 3 Ensure that **Information that's already stored in a file** is selected, then click on **[Next]**

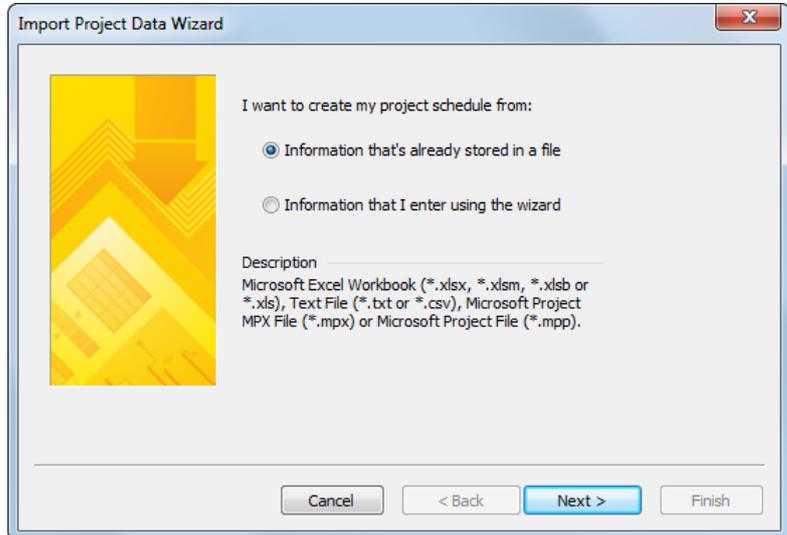
- 4 Select **Text File** from the list of formats, then click on **[Next]**

- 5 Click on **[Browse]**, then double-click on **V515 Gantt Charts_9.txt** in the course files folder

- 6 Click on **[Next]** accepting the default values until the **[Finish]** button is activated

- 7 Click on **[Finish]** to complete the import and create the Gantt chart

You can resize and format this like other Gantt charts



2

ID	Task Name	Start	Finish	Duration	Apr 2011	
					10/4	17/4
1	Research Holiday Locations	11/04/2011	13/04/2011	3d		
2	Contact Travel Agent	14/04/2011	18/04/2011	3d		
3	Book Tickets	14/04/2011	14/04/2011	1d		
4	Pay Agent	18/04/2011	18/04/2011	1d		
5	Organise Passport & Visas	18/04/2011	21/04/2011	4d		
6	Buy Clothing	18/04/2011	18/04/2011	1d		
7	Pack Bag	20/04/2011	21/04/2011	2d		
8	Go to Airport	26/04/2011	26/04/2011	0d		

7

For Your Reference...

To **import data** into a **Gantt chart**:

1. Open a blank Gantt chart, then click on **Import Data**  in the **Manage** group on the **Gantt Chart** tab
2. Select the settings in each step as required
3. Click on **[Finish]**

Handy to Know...

- You can import data from **Microsoft Project** and **Microsoft Excel** files to create Gantt charts, or you can use text files with a **.txt** or **.csv** file format.

PRINTING GANTT CHARTS

Many Gantt charts are too wide to print clearly on one page. There are two steps involved in printing readable Gantt charts. Firstly, you should adjust the size of the drawing page so that it fits

the Gantt chart details only (this will maximise the size of the printed chart data). You can then adjust the printer zoom so that the chart will print on the desired number of pages.

Try This Yourself:

Open File

Before starting this exercise you **MUST** open *V515 Gantt Charts_10.vsd...*

- 1 Click on the **Design** tab, then click on **Size**  in the **Page Setup** group and select **Fit to Drawing**

Before printing any file you should always check it in **Print Preview...**

- 2 Click on the **File** tab, click on **Print**, then click on **Print Preview**

Currently, the chart will print on one page. Let's print it over two sheets of paper to make it easier to read...

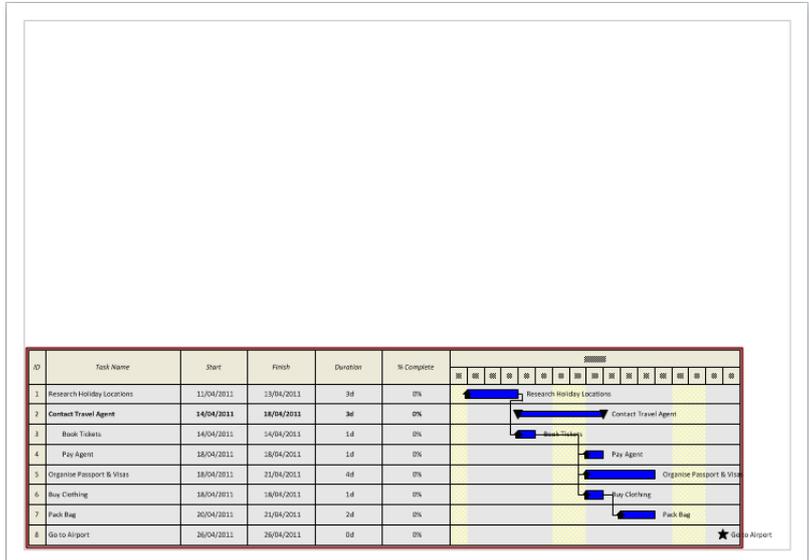
- 3 Click on **Page Setup**  to open the **Print Setup** tab of the **Page Setup** dialog box

- 4 Click on **Fit to** under **Print zoom**, then type 2 in **sheet(s) across**

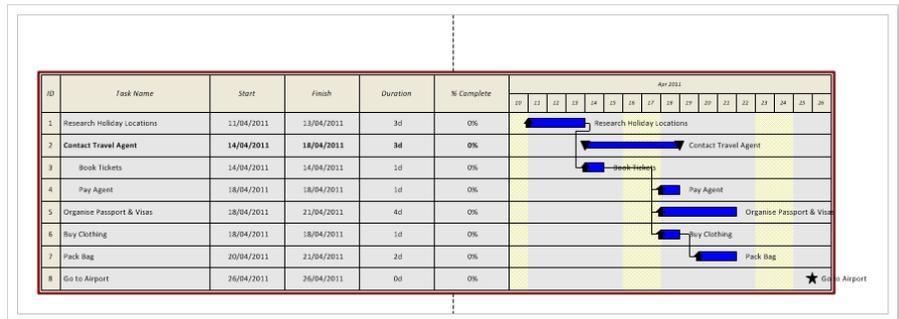
- 5 Click on **[OK]**
Now the Gantt chart will print over two pages...

- 6 Click on **Print** , click on **[OK]**, then close **Print Preview**

2



5



For Your Reference...

To **print** a readable **Gantt chart**.

1. Click on **Size**  in the **Page Setup** group and select **Fit to Drawing** (**Design** tab)
2. Click on the **dialog box launcher**  for **Page Setup** and adjust **Fit to**
3. Select **File > Print > Print**

Handy to Know...

You can access the **Print Setup** dialog box in three ways.

- Click on **Page Setup**  in **Print Preview**.
- Click on the **dialog box launcher**  for **Page Setup** on the **Design** tab.
- Right-click on the page tab and select **Page Setup**.