Microsoft Project Professional2010 Crush Course

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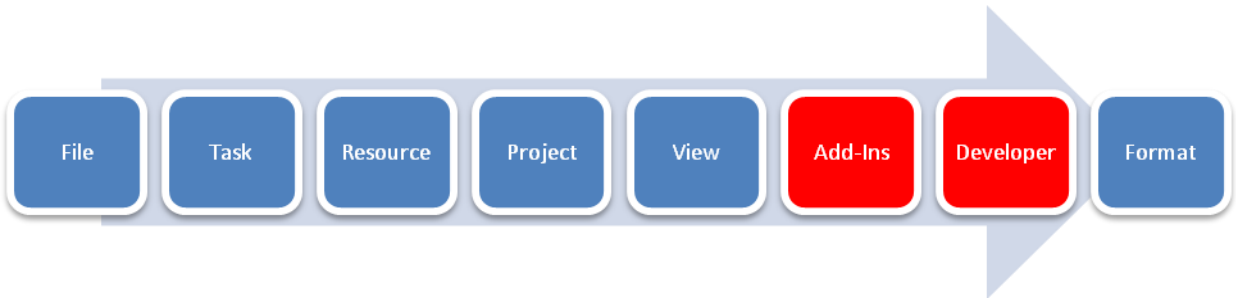
Introduction

More than ever before project management becomes an essential part of doing business. Microsoft Project program is one of the most widely used programs in the project management world. The new MS Project 2010 is a piece of art; MS Project is now much more powerful than before. So as much as you master the MS project as much as you can, you will manage your project more successfully, efficiently and effectively.

MS Project Professional 2010 includes all the features that the slandered edition has, but it is a little bit more expensive. On the other hand, it offers great additional feature like the ability to work with MS Project server and SharePoint server 2010.

The MS Project Professional joined the office family by using the Ribbon instead of the traditional menu. Even it takes much more space at the screen than the old menu bar, Ribbon makes working with project much easier and faster as the commands are in the ribbon directly in front of your eyes, not deeply hidden in the menus and sub menus. Beside, the Ribbon has created logically to meet the sequences of creating and managing a project.

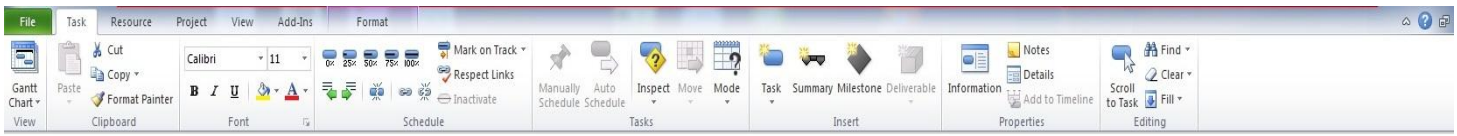
MS Project offers the ability to customize the ribbon by adding or removing tabs;



Quick View

Project 2010 offers flexibility and choice by providing tailored work management solutions for individuals, teams, and the enterprise, besides to providing a new and easier way to manage simple tasks and projects. Here are some of the MS Project Professional 2010 new Features:

- *The "Ribbon", no more menus, sub menus and or deeply hidden dialog box.*
- *The backstage, one location to access your files and the tools you need.*
- *Automatic and manual scheduled tasks options; set up your task details when you are ready.*
- *What you want to see is what you get, great timeline view.*
- *Enhanced Copy to and capability, preserve formatting from the source file*
- *Custom fields.*
- *32-bit color support.*
- *Text wrapping.*
- *AutoFilter improvement.*
- *Save as PDF, XPS.*
- *Team planer where you can allocate your resources by dragging and dropping.*
- *Extended right click menu.*
- *Creating reports and gathering project information are much easier and quicker.*
- *Customizable QUICK Access tool bar.*
- *Dozens of ready-to-use format.*
- *Inactive tasks, where you can disable tasks without affecting your entire project.*
- *Perfect integration with SharePoint 2010.*



*The **Ribbon** (the fluent user interface) contains up level tabs, mainly 7 tabs, where they are built to meet the creating and managing of projects in a logical sequence. Every tab is divided into sections/groups and contain many commands that make it easier to find the command needed.*

File Tab

File Tab: Where we can manage files, such as *open*, *save*, *print, import ,export*, etc…Also provides the backstage that built and organized to handle all the functions needed to work with a file.

We can access the ***backstage view*** from the ***file tab***. In the ***Info tab***, we see information about the active project *(the MS Project by default open on this Tab)*. On the right, the MS Project displays the recent project properties. By clicking the project information on the right, we can select to see the project statistics or advanced properties.

By clicking on ***recent,*** we can view the projects we open recently and this is the quickest way to reopen a file**.** We can click the push pin for the project to stay at the top of other projects and by checking the box at the bottom; we can display and set up the number of projects to be displayed at the backstage menu.

Save, Save as, Open, and Close *>> are standard file management commands.*

Info: *gives you access to the Organizer.*

Recent: *displays the last several Project files that you have opened.*

New: *offers several ways to create a project, such as creating a project from blank file, templates, excel files or SharePoint task lists.*

Print: *for multiple print features*

Save and send*: the new here is that you can save it as XPS or PDF format.*

Help: *gives you options for viewing the online Help*

Options: *displays the Project Options dialog box*

Exit: closes *Project.*

Help: *offline and online help.*

➢ *Start up a project*

- *Create a Project*

  You can create a project form a template; excel workbook, an existing project file, and a SharePoint task list.

  Click ***File tab >> New*** to see available template page.

- *Saving a project*
  - MS project provides many ways to save files, clicking **CTRL+S** *(the quickest way to save file)*

    From the ***File menu*** you can use *save or save as* to save your file in different formats. If you chose older format a warning box will display on the screen to warn you.

  - It is easy to create a back up of your project file by going to;
    File tab >> Save As >>Tools >> General Options >> a dialog box will appear ,check the upper box to create a file backup every time you do save your file, also this dialog box provides you with the capability to set your security level as setting a *password* or making the file *read only*.

  - You can tell the MS Project how you want to save your work. By going to file ***tab >>Options >>Save***, then you can chose the format you want. (From the upper drop down menu) chose the destination folder you want to use. Also you can set an auto save option.

  - ***File tab >> Options >> Trust center >> Trust center settings*** ;To make your computer and documents more secure and to set up your security level. So no spam or viruses can kill your work, or no privacy information may be distributed.

Office template provides you with great template organized based on categories, so according to the category of your project you can navigate the templates folders and chose the one that meet you project.
If you are looking for a specific type of project template, Microsoft provides you with online search capability, type the key word for needed template in the search office .com for templates box.

- *Defining project information*
  - The first thing you have to do after creating your project file is to set your project information as *starting date*, *the calendar working time*, etc. You can do this by clicking the ***Project tab >> Project Information***, the *project information dialog* box will be displayed to set up your project information.

  - By going to ***File >> Options >> Advanced >> General*** then by turning on the *prompt for project info for new projects* option, you can be sure that you will be notified to adjust your project information every time you open a new project file.

Task Tab

Task Tab: Manages task related commands, and it is divided logically into sections/groups. Here we deal with the data we frequently work with. The tasks are the basic building blocks in any project.

View group*: to chose the project view oriented we want.*
Clipboard group*: to copy, paste and cut tasks.*
Schedule group*: to crate links between tasks, move tasks around, and update tasks progress.*
Tasks group*: to change the task between manually and auto scheduled mode, and to review task with the task inspector.*
Insert group*: for creating tasks, summary tasks and millstones.*
Property group*: open the task information dialog.*
Editing group: *where we can see the task bar for the selected task*

➢ *Set up your tasks*

- *Create a new task*
  - The new in Project 2010 is the manual scheduling mod; which is the default mode; gives you the control over the start and finish dates of the tasks. Why!! Because at the begging of the project you may not have all the needed information such as staring date, finishing date, dependencies, etc… So you can just write the task name and later fill out the other field. Also, MS project 2010 provides you with great flexibility as you can type text (notes) in the starting and finishing date field. The task bar shows what information is filled in or missing.

*The **8/80** rule means that the right duration of a task should be between 8 hours to 80 hours duration*

  - You can change from auto to manual schedule mode and vice versa by selecting the task mode from the task mode column. The start, finish dates and the duration are connected, so if you set the start and finish date the program will automatically calculate the duration for you, or if you set the duration the program will set the task's starting and finishing dates automatically.

  - The **task type** affects our schedule whenever we edit the task's work, duration or units values. But on the other hand effort driven affects our schedule when we are assigning or removing resources from the task.

  - *MS Project 2010* offers a great copy and paste capability where you can copy tasks list from word excel and outlook in the **outline level**, which means that the documents structure and format stay as is after copying.

- With *MS Project 2010 it is so easy to switch for summary task level view, all that required is to turn on the check box in the **format tab** >> **show/hide**.*

- Viewing the WBS is also easy but it requires you first to add *a WBS column* to the working stage, this can be done by going to ***column heading >> then right click it to choose insert column***, a list of all the task fields that MS Project offers, select WBS. You can set your own WBS type and this can be done by going to ***Project tab >> WBS command-define WBS***.

- The link task command in schedule groups under task tab only creates finish to start dependency which is the most common dependency. For creating the other type of tasks' dependencies the easiest way is using the ***task form***.

*To prevent program from auto linking task you disable this function form file**>>option>>schedule** and turn off the auto inserted or moved tasks check box.*

- Also the ***Task Information dialog box*** provides you with the capability of working on tasks' dependencies but it is only assign predecessors.

- *Create summary task*
  - A great option that enables you to organize your project in a better way, also it provides you with the needed time to complete the job as it is automatically calculate the duration of the related subtask.

You can move summary task to any level of the project by highlighting it and then drag and drop

  - To add a summary task select a blank row then go to ***Ribbon >> Insert >> press summary task.*** But you can group sub tasks under a summary task by highlighting them and then pressing summary task which will create a summary task with several sub tasks that you have highlighted.

- *Create a recurring tasks*
  - It will be a headache if you are going to build every recurrence tasks such as weekly or monthly meetings in separate. This command is available on the ***Ribbon >>Task tab >>Insert >>Press on Tasks>>***set your task name, duration, recurrence, the range of recurrence, etc…

4 types of tasks relations:
Finish to Start (FS)
Start to Start (SS)
Finish to Finish (FF)
Start to Finish (SF)

You can place your recurrence task anywhere in the project.

- *Create your milestone*
  - Milestone has zero duration, so it does not affect your project duration. Milestone is a great way to show when you got deliverables.
  - What is new here is that *MS Project 2010* provides a special command specifically for creating a milestone. You can find that command on the ***Ribbon >>Task tab >>Insert group***.

Resource Tab

***Resource Tab*:** focuses on resources related**.**

View section: *To view resource views, the commands that are active on the tab depend on the view we select. In another words "the section will be endless or disables depends on the view you have selected.*

Assignments section: *To assign resources to a task*

Insert section: *To insert resources*

Properties section: *To look at resource information, notes or resource details.*

Level section: *Have commands for leveling assignments, to remove over allocations*

➢ *Work with resources:*

There is no project without resources; MS Project offers 3 types of resources: **(work, material, and cost).**

- ***Work resources***: For resources we use for a period of time (*people and equipments*) the most used. The critical here factor is **time**.
- ***Material resources***: Supplies, tangible items, and consumables. The critical factor here is the **quantity.**
- ***Cost resources***: Cost items like rent, meals, and stationeries. *We don't apply a cost when creating them just we apply the cost when we assign the cost to a task.*

*The two variable consumption of material resources are **fixed consumption** rate and **variable consumption** rate.*

- The easiest way to deal with **resources basic information** is using the **resource sheet**. But to enter more detailed information about resources we do this by going to ***Resources tab*** >> ***Information*** >> ***Resource information dialog box***.
- Resources can have their *own calendar* which provides us with great flexibility.
- To see the spending by category the ***Resource Usage View*** is the best place.

➢ *Why Understand the duration, work and units.*

Without specific instructions from your side, the MS project tries to change in sequences the duration then work and finally the units. Also if you leave the unit field blank, the MS Project assigns the MAX (100%) by default.

- The task type ***fixed work, fixed units, fixed duration and effort driven*** are important factors to determine how the program will do calculation. As example (*A task should be finished more quickly which means shorter time and the work stays the same)* so we change the task type into **fixed work.**

- **Effort driven scheduling** means that the task's total works stay the same as you add or remove resources to a task. Let's say that you have a weekly meeting, the duration of the meeting does not shorten if you add more resources so **clear the effort driven check box**.

*The **Task form** and the **Assign Resources dialog box** help you to assign resource to tasks.*

- **Project Resource Usage view** is a way to view all resources day by day assigned hours or work load. You can filter the overall allocated resources by clicking on the arrow at resources name header then point to filter and chose over allocated resources.

- The ***Team Planer*** view is one of the new features MS project 2010 offers, team planner is a great method to manage small teams, you can drag and drop assignments and move them around. ***Prevent over Allocation*** command in the format tab is a great command that goes side by side with the team planner.

Duration = Work/Units
WORK=Duration*Units
UNITS=Work/Duration

- We can specify when fixed costs should occur in the project (at the start, at the end, or prorated). This is very useful to determine how costs are scheduled over time and will help us to monitor and track the cash flow of our project. By default **prorated** is assigned.

Project tab

***Project tab*:** focuses on project wide activities, and contains commands that usually deal with the entire project.

Inset section: to insert subproject or create links between tasks in separate projects.
***Properties section*:** access custom fields
Schedule section: where we can re-schedule tasks, move task, and set a project baseline
Status section: update the project status
Reports section: run or generate custom reports
Proofing section: check spelling

➢ *Set up your calendar*

- The times that people work(days, hours…) and the resource availability time mainly affects the project duration and schedule. The project calenders options tell the programe how to convert durations into hours of work.

- To modify your working time go to ***Project tab >> Changing Working Time >> Changing Working Time dialog box***. You can modify the existing standered calendar or you can create a new calendar.

- The calendar can be assigned to individuals, group, or a specific task.

- The ***Organizer*** in the file menu let you copy the calendar so you can use them in different projects.

By choosing the week tab and clicking details, a dialogue box appears to let you modify your working and non working days, and you can also adjust the working hours for specific days.

- The ***Schedule Option*** of the project should match the **Works Calendar Option** you sat in order to the programe to perform correctly .So if you modified the project calendar you need to modify the working hours and days for schedule .To do that go to ***File >> Options >> Schedule >> adjust***.

We use exception tab usually for non working time like (company holidays).Go to exception and set up the name, the starting and finishing date the press details so a dialog box will appear to let you set the detailed information for your exceptions, if you have a regular exceptions you can set them by activating the recurrence pattern and range

View Tab

***View Tab*:** Is to tell the project what we want to see. Here we control the way we want the data to be displayed. In another words view is the working space that we work and look at. Usually we deal with one or two views at the time. Our main focus here is the tasks and resources. The **Gantt** with **Timeline** view is the default view.

➢ *Working with views*

MS Project 2010 offers dozens of views,and offers great view flexibility by enabiling you to select from deferent view pains (*Single pain view,detailed pain view,compaination pain view*).The compinaition pain view means that we can display the *details view* under the *primary view*. To hide or show the details, turn **on/off the details check box on the view tab**.

- The task and resource tabs include commands for displaying the most commonly used task/resource views.

- The view tab provides easy access to many great views:
  - *Task view section includes*
  - *Resource view section*
  - *Data view section*
  - *Zoom view section*
  - *Split view section*
  - *Windows view section*
  - *Macros view section*

*The **time line view** is a great new feature, you can display it by turning on the timeline check box in the View tab.*

- View shortcuts are located at the right side of the states Bar.

- MS Project 2010 is flexible enough that lets you choose the table or any combination of tables you want to see.To do this go to ***View Tab >> Tables***,then chose the table you want. Or you can do this by right clicking the all cells box and then choosing the table you want. Beside that we can add ,remove ,rearrange or change the setting of any column within any table by right clicking the header of the column and choosing the desired action .To save the modified table, go to ***View Tab >> Tables*** **>>Save fields as a new table.**

- By the new ***sort options*** finding information we looking at is very easy;go to **View tab >> Sort** to reaarnage the data as you want .Or you can go to the clomun header ***down arrow*** and choose the sort ***option or filtering option***. Or even you can build the sort criteria you want from the sort command.

- ***Grouping option*** is another great function offered by MS Project 2010,Go to ***View >> Data >> Select group by*** to chose the group you want. Or from the right down arrow on the column heading cell you can choose the group you want to show.Even you can customize your group by choosing more groups from the groups drop down menu located in the ***Data at View Tab.***

Format tab

Format tab: It changes commands based on the view we opened. Basically the active commands depend on the active view.

If you make the windows smaller the ribbon adjusts itself to fit in. By right clicking on the ribbon, we can minimize it so just the top level tabs will be visible. Also, we can use keyboard shortcuts to work with MS Project; by clicking ALT key the short cut letters will appear on the ribbon, so press the letter to choose the tab we want.

Quick access tool bar is separate from the ribbon but it is great for the commands we use frequently as we can add commands as much as we want.

➢ *Top-Down and Bottom-Up Planning*

- *Top-down planning* means high level planning as we identifies the major phases of the project before breaking them into detailed tasks. Here we plan from general to specific.

- *Bottom-up planning* means that we identify very detailed tasks then group them into major phases (summary tasks).here we plan from specific to general.

➢ *Setting Task Constraints*

- *Flexible constraint* which is the default constrait type in MS Project and it is ***start as soon as possible*** **(ASAP).**Here no constraint date is assosiated.***As late as possible(ALAP)*** is another type of flexible constraints.

- *Inflexible constraint* means that a task should start of finish at a specific date.A special indicator is displyed at the indicators colomn when we use this constrait.***Must start on (MSO)***is a inflexible constraint.

- *Semi-flexible constraint* where a task has a start of finish dates boundry.MS project desplies special indicator in the indicator colomn. **Start no earlier than(SNET)** is an example of a semi-flexible contraints.

  We cannot change date type or set constraint date for manually scheduled task.

  To set the project to honor relationship over constraints we go to ***file >>options >>schedule >>*****check** "task will always honor their cons traint date"

  Entering the end date is preferred rather than using semi or inflexible constraints.

➢ *Fine tuning project schedule*

- ***Task inspect***

  is a new feature added to the MS project 2010.Usually manual scheduled tasks create a schedule problems .If you right click a task, corrective actions displays on the shortcut menu.

- ***Delaying a task or splitting a task***

  By using the *leveling delay* field you make clear that the delay is due to the resource availability. And you can remove the delay if you decided to use different resources. *Splitting a task* is another solution where we break a task into two or more pieces and schedule other work somewhere in the middle.

  *In another words **delay a task** so the assigned resources can work on the tasks one after the other, **Split task** so that the resources can go back and forth between tasks until all the work is done.*

  By using the work counter we may eliminate over allocation without reassign resources

- ***leveling Gantt View***

  makes it easy to work on task delays.the leveling delay cell where you type the delay time(the **e** stands for ellaps time which means it does not take non working days into account).

- ***The work contour***

  Applied to reflect how the work is really getting done. Work contour is applied for the **auto scheduled tasks only**. ***Flat counter*** is the default work behavior (*it is schedules the same hours each day*).To be more realistic as most time we did not spend the same time on the task every day MS Project offers several types of work contour. To apply a work contour go to **View tab >> Resource Usage >> Double click on the task you want to apply the work contour to >> Assignment information dialog box appear >> from the drop down** menu you can chose the type of the work contour you wish to apply.

  Applying a contour to a fixed duration task will cause project to recalculate the resources' work value. Applying contour to a fixed duration task causes no change to the duration. But applying contour to fixed work/unit task will cause duration to change.

- *The work contour types:*
  - ***Back loaded*** means that the highest level of work is loaded at the end of the assignment.
  - ***Front loaded*** means that the highest level of work is loaded at the beginning of the assignment and decreases at the end.
  - ***Double peak*** suspicion bridge work hours go up and down.
  - ***Late peak*** starts slow and increase to a peak near the end.
  - ***Early peak*** starts as a peak at the begging and decreases near the end.
  - ***Bell counter*** increase to a peak then tapers of to the end
  - ***Turtle*** like the bell counter but ramps up and down more quickly.

We cannot define a custom contour but we can modify the working hours manually.

- *Leveling option*

Let us control some aspects of the project leveling strategy. MS Project 2010 provides 3 leveling features;

  - ***Level selection*** tap (you can chose specific task and apply leveling only to them),
  - ***Level resources***(apply for specific resources),and
  - ***Level all*** where you apply leveling to the entire project.

sticts to ***delays and splits*** to get rid of over allocation.The ***leveling Gants Charts*** view helps you to see the result of leveling right away (*In the Resource Tap click the view down arrow and chose leveling Gants).*

- *Inactivating task*

Is a great new feature of MS Project 2010. It helps you document tasks in several situations.All task information remains in the plan but they not contribute in the project cost or resource work load. Additionally, it is used usually in *"what-if* scenario".

➢ *Understanding the baseline, schedule, and actual values.*

- ### *The Baseline*

When we finish a project plan we can save it in a baseline which represents the targeted values we want to achieve at the end of the project. MS Project uses the baseline values and current values to calculate the variances and other performance measures.

There is only one view that shows the baseline view which is the **tracking Gant**, another helpful view is the task details form (go to view tab—turn on the detail check box—click on the down arrow and chose more views to select task details form).These two view can help you to handle on the difference between the baseline.

At the begging of the project the current and the baseline values are the same but as the work is going on the current values change.

MS Project can save up to eleven baselines. To set a baseline or clear baselines go to (*Project tab—set baseline command—a set baseline dialog box opens. In the format tab you can chose the baseline you want to look at).* To edit a baseline or to edit some specific task in a baseline instead of selecting the entire project option in the baseline dialog box we select the ***selected task option***.

Interim plan is like baseline but it only saves the start and finish dates of the tasks.

- ### *The Schedule*

MS Project offers different ways to update your schedule. We can do this by updating the ***status date*** in the project tab and select the tasks we want to update and select ***mark on the track*** command in the task tab. Another method is the ***percent complete*** (*which represents the duration that completed not how much work is done)*.This can be done by clicking on the task and from the drop down arrow we chose the percent we want, or from the mark on track we chose update a task.

Project scheduling formula
*Work=duration * units*

- *Using Overtime*

If resource earns the same amount per hour no matter how many hours they work we can assign overtime by setting a work week with longer working hours.

If resource earns more for working overtime we have to set their rate in the ***overtime rate field*** and fill in the overtime work field with the number of hours of overtimes you want. By this MS project takes care of calculating the cost for regular and overtime works hours and gets your labor costs correctly.The best way to work with overtime is to customize the resource and task usage view to show the overtime.

- *Earned Value*

Earned value analysis measures the progress by determining how much of the project costs we have earned. We use the earned value technique to figure out where the project stands in terms of cost and schedule. The first step in order to start working with earned values is the set up of the status date in the project. To display the earned value table go to tracking Gant then click the all cells box and choose more tables, from the dialog box select earned value.

  - ***BCWS*** stands for the Badgeted Cost for the Work Scheduled.Also known as the **Planned Cost**.It means how much you planned to spend in on the work scheduled through the status date.in another words it is the baseline cost for the work scheduled.

  - ***BCWP*** stands for budged cost of work performed(**Earned Value**).When the BCWP is higher than the BCWS then we have got more work comleted through the status date than we had originally planned.(**Earned Value>Planned Value** the project is a **head of the schedule**.)

  - ***ACWP*** is the actual cost that we have spent through the status date. If the **Actual Cost <Planned Cost** then the project is **under budget**.

We can display the values of (PV, AC and EV) graphically by choosing the project tab then selecting the visual reports command, from the dialog box we choose Earned Value over Time Report.

  - **SV (SchaduleVariance)= EV-PV,**if it is positive then more work is completed than we have planned.

  - **CV (Cost variance)= EV-AC,**if it is positive then the project is under budget.

- **EAC (Estimate at Completion)** is an estimate of how much the task will cost when it is done, based on its performance so far .

- **BAC (Budget at Completion)** means the baseline cost**.**

- **VAC (Variance at Completion)** is the difference between the EAC and BAC.

Please refer to Microsoft Project 2010 step by step tom get the maximum and to be MS Project 2010 Expert.

References:

Microsoft Project 2010 step by step…By Carl Chatfeld and Timothy Johnson

http://www.microsoft.com/learning

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A Guide to the Project Management Body of Knowledge (PMBOK)….PMI