Define a Project

Define a project:

Objectives: Clear project objectives are crucial because project success will be determined by how closely you meet them. A clear project objective is both **specific** and **measurable**. Avoid vague objectives such as "Create a state of the art learning environment". Objectives may include:

- Deliverables
- Milestones
- Specific due dates
- Quality criteria
- Cost limits

For objectives to be effective, it is important that all Stakeholders officially agree to them.

Assumptions: During the planning stage there will be many unanswered questions, such as "When will key resources be available and how much time a new process will take?" To begin you make educated guesses and then use those estimates to create your schedule. Areas where assumptions arise:

1. Handoffs from other departments. If your project depends on the work of others do they understand your dependency and agree to hand-off dates you expect?

2. Resource availability and usage. If you do not manage some of the people who does and have they approved your use of their resource.

3. Task durations. Are your estimates based on solid information or guesses?

4. Project costs. How important is cost to your project?

5. Available time. Can you realistically complete tasks on time with acceptable quality?

6. Deliverables. Does your deliverable match what you stakeholder expects. Get agreement.

Constraints: Constraints on a project are factors that are likely to limit the project manager's options. The three major constraints are:

Schedule: fixed dates, deadlines and milestones.
Resources: People, materials, facilities and Equipment.
Scope: The project requirements change.

Scope: A combination of all project goals and tasks, and the work required to accomplish them. Scope management is a procedure for handling changes to your project. A plan may include:

An assessment of how likely and often the scope will change.

A description of how scope changes will be identified and classified.

A plan for scope change. Notify the sponsor and issue a change order.

Deliverables: A tangible, verifiable outcome of work. It must meet Predetermined standards for its completion. Is "I want a product that works" a good deliverable?

Deliverables have stakeholders. The stakeholders Must accept the finished state of the deliverable.

Deliverables have an agreed upon grade and quality that set appropriate expectations for its completion.

Need to create a schedule focused on deliverables. They include:

A separate phase with one task: With a milestone to represent completion.

A group of tasks in a phase. Can schedule a team to work on the phase, such as "all routine maintenance task".

A group of deliverables. Worked on during the same time period, by different groups.

Project Plan Activities

Start a project file

1. Open a file	New:	Open MSProject application or if it is already open click on the "new blank document" button (top left).
	Existing:	Click on open file (second from top left). Open file or Template
2. Enter file properties		On the file menu, click properties, then click summary tab.
3. Set project calendar		On tools menu, click **Change working time**. In the **for** box, click project calendar. To change one day for the entire calendar click on that day and change time by clicking "nondefault working time" and then entering the new times. Click "non working" if it is a holiday or some other day off from work. To change two or more random days click on each day while holding down the "Ctrl" button to highlight the days to be changed. Change time by clicking "nondefault working time" and then entering the new times. Click "non working" if the days are a holiday or some other day off from work. To change one day of the week for the entire calendar click abbreviation at top and change time by clicking "nondefault working time" and then entering the new times. To change all working days click abbreviation at top, hold down the shift button and highlight the days to be changed. Note about individual resource calendars. Put "Jim" in resource table. Go back to "Change working time" and show Jim's calendar.
4. Enter project information		On the Project menu click Project information.

Outline tasks

1. Enter important tasks:	
New	In the **Task Name** field type a task name. Press enter. You can organize your tasks as you enter them or wait

until they are all entered then organize them.

Note: you can enter a task between existing tasks by selecting the row below where you want the new task. On the Insert menu click New Task and enter the task name in the inserted row.

Reoccurring

Highlight the row where a reoccurring task is to be entered. In the **Insert** menu click Recurring Task. The Task Information box will appear. First enter your task name. Enter:

- Task name
- Duration
- Frequency
- Date
- Range
- Calendar

2. Create summary & sub tasks:

Summary tasks

In the **Task Name** field click the first task that you want to be a sub task. On the Insert menu click **New Task**. Type the name of the summary task and press enter. Select the task(s) that are to be subtasks (if more than one) press **ctrl** and then click each task. Click **Indent** → to indent task(s).

Sub task

Enter or select tasks that are to be sub tasks under the summary task and Click **Indent** → to indent task(s).

3. Supporting info

Click on task (or icon on toolbar) for task information.

- General:
  - Name of task
  - Duration (? Is estimated)
  - Percent complete (tracking)
  - Priority
  - Dates
- Predecessors
  - Linking to other tasks
    - FS
    - SS
    - FF
    - SF
  - Lag (FS with + will delay start by lag time)
- Resources
  - From resource table or enter

Advanced
- Constraints
- Constraint type (eight types)
  - Flexible 3 (duration only set)
  - Semi-flexible 3 (soft) Duration can't change but start or finish date can (has a start or finish boundary).
  - Inflexible 2 (hard) must begin or end on a certain date
- Task type work = duration x units
  - Fixed units (default)
  - Fixed duration
  - Fixed work

Notes
- Enter important info about a task.

Task Organization:

1. Link tasks

To link a two tasks;
- If nonadjacent – highlight first task press CTRL and highlight second task. Then click the link icon.
- If adjacent – highlight first task press SHIFT and highlight second task. Then click the link icon.

To change a link – Click on link line and type what you want in the **Task Dependency** box.

2. Move tasks (copy and delete)

To move a task click Cut Task. Then Highlight the row where the task is to be placed and select paste. (or highlight the row to be moved, then left click once and hold down while you move the line that appears to the new row for the task).

Note: It is best to move tasks before Establishing task dependencies. MSP will reestablish task dependencies. It will also move subtasks, notes, and linked or embedded objects. (you can manually

	prevent this operation (**Tools, Options, Schedule**, clear **Autolink**).
3. Split a task	Click **Split Task**. On the task's **Gantt bar**, click the area of the bar where you want the split and drag the second part of the bar to the date the date that you want the work to begin again.
Note: WBS organizations	The hierarchy of tasks in your project.
<u>Estimated task durations</u>	
1. Estimate & enter a duration.	In the duration field, type the duration you want.
2. Change a task duration	Click on the duration box and use up & down arrows or type in a duration. Can also be changed in the Task Information box.
3. Create milestones	Type 0 in the duration field. Some milestones will have a duration. For example, task with an approval process that will take a week
4. Start & end date	Click on the start or finish box and use the calendar to enter a date or directly enter a date into the box.
<u>Set task dependencies &constraints</u>	
1. Create a deadline	When you want to track a deadline for a Specific task but don't want to lock your Schedule by setting an inflexible constraint you can set a deadline date. Click **Task Information & Advanced.** Click **Deadline**
2. Tie a task to a specific date	When you have unavoidable constraints, you Can tie a task or phase to a specific date. Select **Task Information** & **Advanced**. In the **constraint** box, MSP sets 1 of 8 types of constraint.
<u>Assign resources</u>	
1. Enter resource names	Go to the Resource Sheet. Enter resources in the table. Several fields appear including; Type Max units

Accrue at
Base calendar

2. Add notes about resources

Like the Gannt Chart with a Task Information box the resource sheet has a Resources Notes box. To open it double click on the row you want information about. It includes.

General
: Enter start and end dates and percent available.

Working time
: Set up individual calendars for a single resource or groups.

Costs

Notes

3. Assign a resource

In the resource field of the Gantt chart enter the name of resource, or select from those already entered.

Advanced Project Plan Activities

Optimize the Project Plan

Critical Path	A critical path is the series of tasks that will push out the project's end date if they are delayed. The word "critical" has nothing to do with how important these tasks are to the overall project. A key to understanding the critical path is to understand **slack**, known as float. There are two types of slack; free & total. **Free Slack** is the amount of time a task can be delayed before it delays another task. **Total Slack** is the amount of time a task can be delayed before it delays the finish of the project. A task is on the critical path if its total slack is less than a certain amount, normally zero. To view critical tasks in the **View** menu select **more views**. In **more views** select **Detail Gantt** and click apply. (critical tasks are in red, non critical in blue).
Review costs and dates	If resources are not assigned then you can only track durations and start and finish dates. If resources are assigned then to update remaining work click on the **Tools** menu then click **Tracking and Update Tasks.**
Identify over and under allocated resources	Once your have built your plan you can review how well your resources are used to handle over allocation. Example: Enter new project with task 1 and task 2. Set duration to 3 days for both tasks. Enter Jim and Tim in the Resource sheet. Select Tim for both activities (Watch move). **Undo entry** For task 1 put a constraint must start on first 2/6/01. Set task 2 to Start no later

	than 2/5/01. Put Tim in for task 2. Watch split.
Baseline a plan	A baseline is a snap shot of your plan that Saves start & finish dates, resources and assignment values.