Planning Your Time

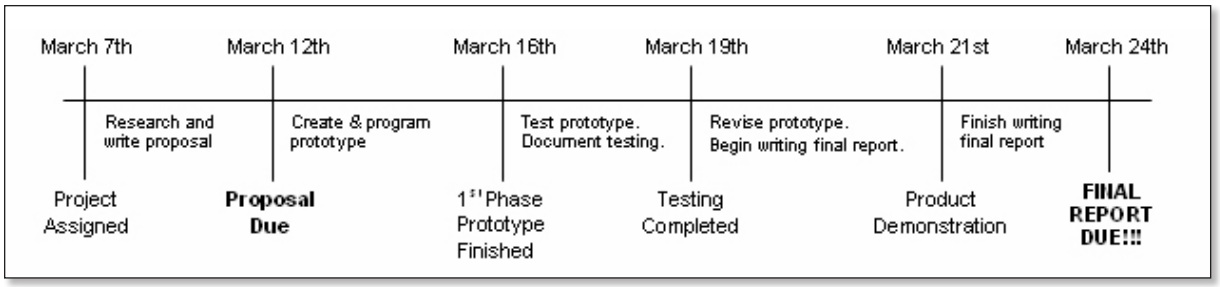
Why plan instead of just do?

Time is one of the most critical resources in any project. Good planning spreads the necessary work over a reasonable period of time. This allows everyone to work at a consistent, sustainable pace. Poor planning leaves people stuck and idle, then forces them to scramble to catch up later on. While it does take time to plan ahead, the time (and trauma) saved more than make up for it. Good planning is a part of good doing.

Work Planning Aids

Three key tools used by Project Managers while planning work are the Timeline, the Gantt Chart, and the PERT Chart.

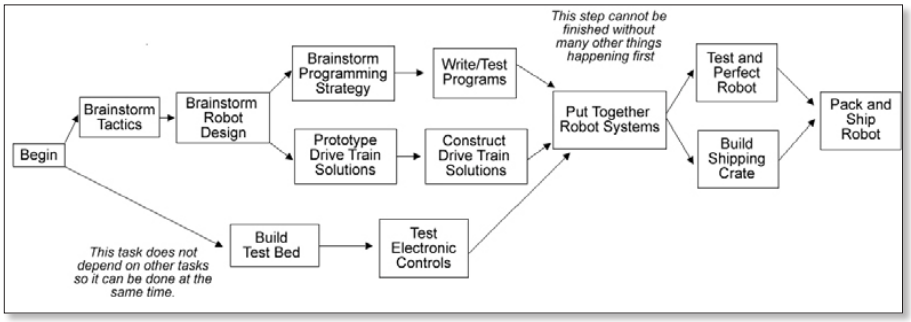
- A **Timeline** is a clean and concise visual representation of a series of events.
  It helps you to arrange large chunks of time and see the overall plan easily.



- A **Gantt Chart** is a more detailed description of the schedule, focusing on when individual tasks will be worked on.

Time				
Tasks	Week 1	Week 2	Week 3	Week 4
Task 1				
Task 2				
Task 3				
Task 4				

- A **PERT Chart** is a tool for illustrating workflow dependencies.
  It shows the order in which tasks must be completed because they depend on each other.



© 2010 Carnegie Mellon Robotics Academy

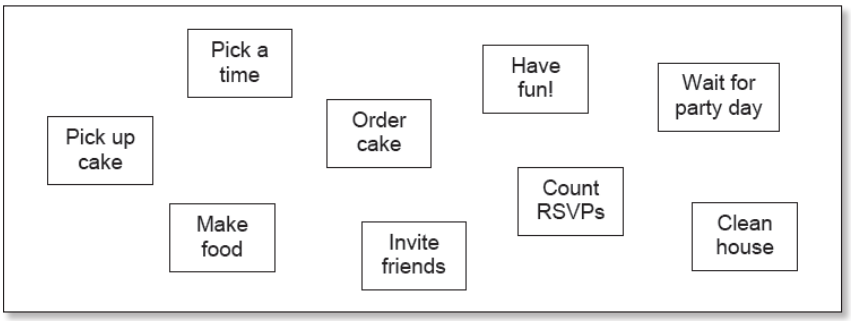
Project Planning • Planning Your Time

Planning a birthday party

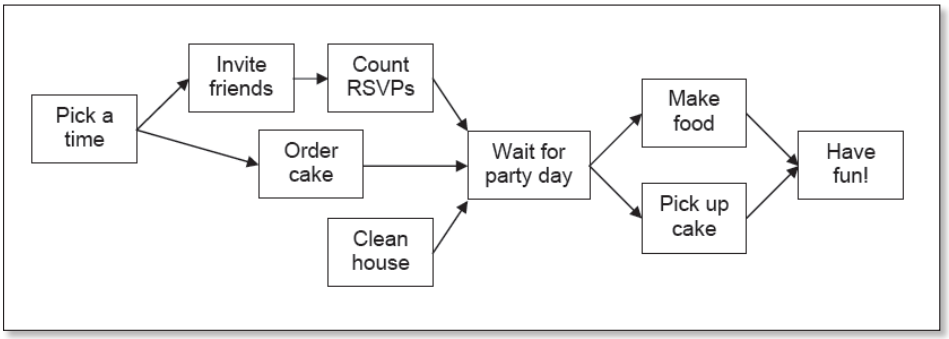
1. Construct a PERT Chart to see what must be done first, second, etc.
2. Identify dates for deliverables, both final and interim
3. Construct a basic Timeline with the set deliverables
4. Sort the tasks in your PERT Chart by due date
5. Use the dates from the timeline and the tasks from the PERT chart to build the Gantt chart
6. If conflicts arise, work within your group to reallocate resources to resolve them, & adjust your documents accordingly
7. Finished PERT Chart, Timeline, and Gantt Chart go into Proposal

Step 1: Construct a PERT Chart to see what must be done first, second, etc.

1. Identify all the necessary tasks in the project



2. Identify dependencies – groups or sequences of tasks that must come in a certain order for one reason or another. Use an arrow to indicate tasks that must occur in a certain sequence.



Step 2: Identify dates for deliverables, both final and interim

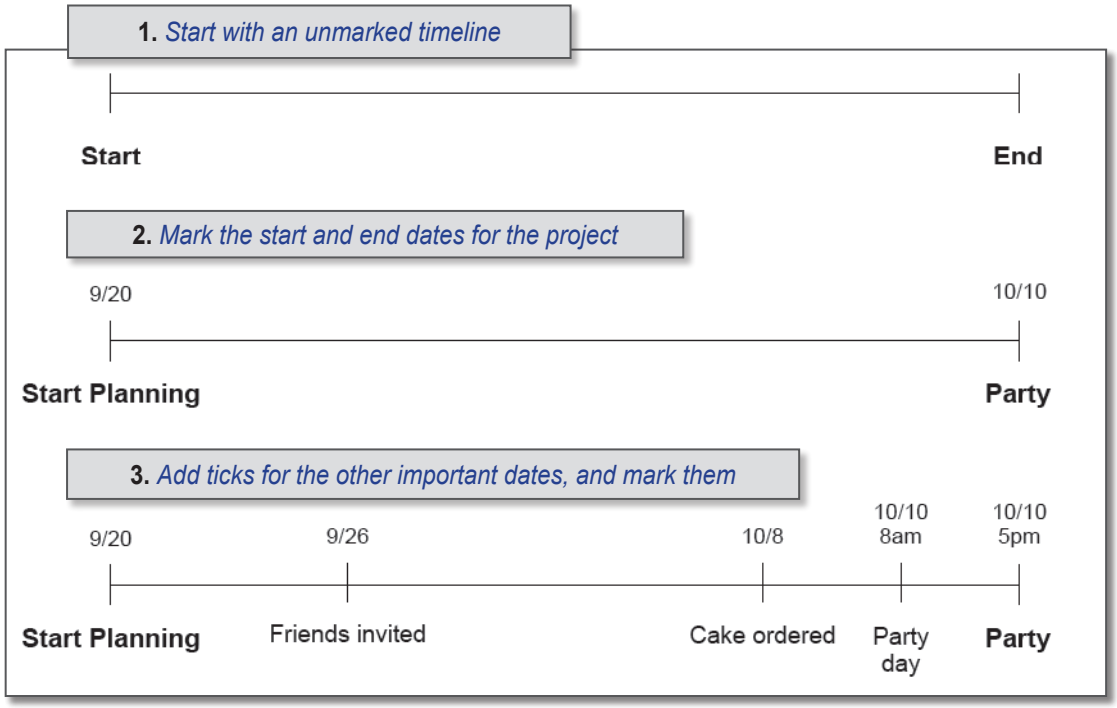
List deliverable dates and deadlines

- Birthday party will be on October 10 (time TBD)
- Cake must be ordered 24 hours in advance – by October 9 – to be ready in time
- Friends need at least two weeks notice in advance (September 26)
- Final preparations must begin at 8am on party day

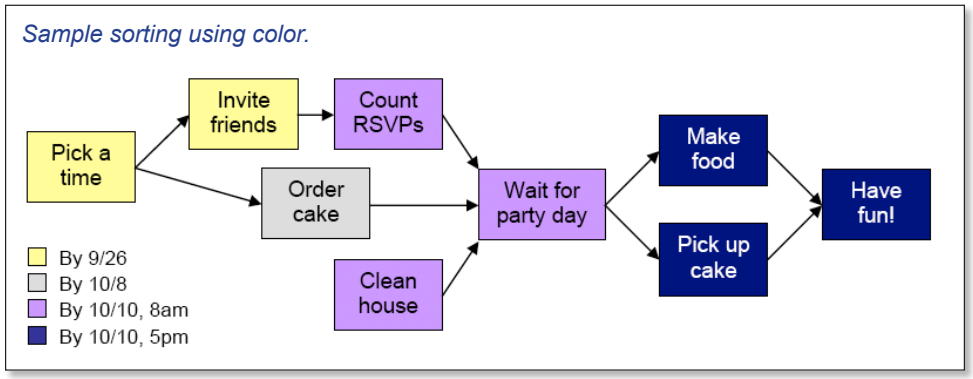
© 2010 Carnegie Mellon Robotics Academy

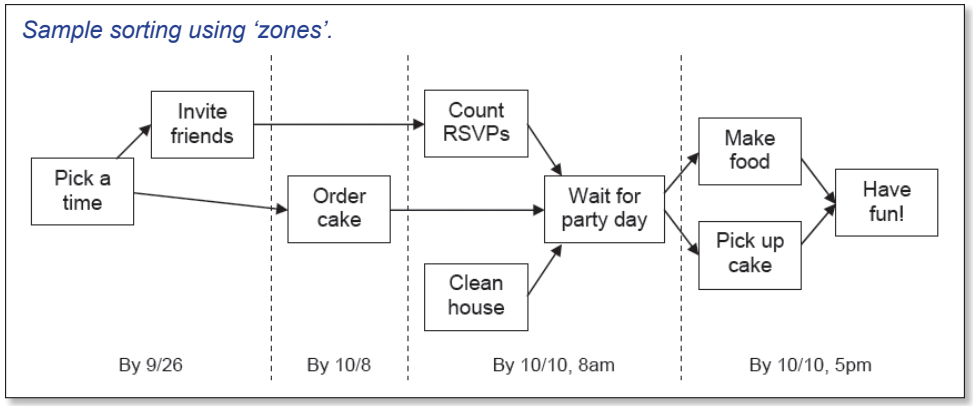
Project Planning • Planning Your Time

Step 3: Construct a basic Timeline with the set deliverables



Step 4: Sort tasks in your PERT Chart by due date





© 2010 Carnegie Mellon Robotics Academy

Project Planning • Planning Your Time

Step 5: Using the other charts to organize your thoughts, build the Gantt Chart

1. Build the frame of the chart. There should be one row for each task in the PERT chart, and one column for each working day in the project from start to finish. We'll assume you don't want to work on weekends…

	Start Planning, 9/20			*(Monday, 9/25)*	Friends invited, 9/26				*(Monday, 10/2)*					Cake ordered, 10/9	Party Day, 10/10
Pick a time															
Invite friends															
Order cake															
Count RSVPs															
Clean house															
Wait for party day															
Make food															
Pick up cake															
Have fun!															

2. Estimate how long it will take to work on each task, and fill in blocks for days on the chart when you will work on them.

Tip: Some things can be done at the same time (for instance, it takes only a moment each day to count RSVPs, and you can be cleaning house the rest of that day). Your PERT chart shows when 2 tasks have to be completed one after the other– an arrow indicates the required order– and when they can be done independently (no arrow connecting them).

	Start Planning, 9/20			*(Monday, 9/25)*	Friends invited, 9/26				*(Monday, 10/2)*					Cake ordered, 10/9	Party Day, 10/10
Pick a time															
Invite friends															
Order cake															
Count RSVPs															
Clean house															
Wait for party day															
Make food															
Pick up cake															
Have fun!															

Step 6: If conflicts arise, reallocate resources to resolve them
You need to pick up the cake and make party food at the same time on the party day 10/10. You can't be home to cook and leave to get the cake at the same time, so you should reassign one of those tasks to another group member.

Step 7: Finished PERT Chart, Timeline, and Gantt Chart go into Proposal
If someone needs to approve your plan for the party, these charts would go into your submission as proof that you will be able to accomplish the task in an organized and timely manner.

© 2010 Carnegie Mellon Robotics Academy