AISC2011
Data Science Project Management and Requirement Gathering (PMAI)

Winter Semester 2025

Tuesdays 3-4PM

Soumo Mukherjee

Agenda - Weeks 1,2 – Course Outline

- Attendance
- Learning Outcomes
- ~~Meet & Greet~~
- Housekeeping
- Course Breakdown

Learning Outcomes

- Understand the goal of this course
- Understand the importance of project management
- Learn to work in Teams
- Be able to track projects
- Be able to communicate in a team

JAN 21 - JAN 30

CAREER

Career Boot Camp 2025 | Camp de carrières 2025

1:00 pm • Venue: Online • Information •

Are you ready to take your career in the federal public service to the next level? Look no further! We are thrilled to announce the 4th virtual edition of Career Boot Camp. Hosted by the Federal Youth Network (FYN), Career Boot Camp 2024 is your gateway to unlocking the secrets of building a successful career in the federal public service. Whether you're just starting or looking to supercharge

JAN 22

STUDENT SUCCESS

Catholic Crosscultural Services (CCS) - Virtual Session About Transportation System in Toronto

Date: January 22, 2025 •

Time: 10 AM - 11 AM - Online •

Catholic Crosscultural Services (CCS) is inviting you to join a Zoom session about the transportation system in Toronto

In the session, you will learn about how different transportation systems work, what are your different options for in-city or intercity transportation

JAN 27

STUDENT SUCCESS

Catholic Crosscultural Services (CCS) - Virtual Session About Tax Obligations of International Students

Date: January 27, 2025 •

Time: 10 AM - 11 AM - Online •

Catholic Crosscultural Services (CCS) is inviting you to join a Zoom session about tax obligations of international students

In the session, you will learn about your tax obligations, how to file your taxes, resources for filling taxes, how taxes are calculated and the

Project Management Institute. Toronto

Project Management as a Career

Join us for our *free* virtual event on Wednesday, October 23, 2024. 7:00 to 8:30pm.

Agenda

- What is a Project Manager?
- Project Management job trends
- Pulse of the Profession - The Future of Project Work
- PMI Certifications
- “A Day in the Life” of a project management professional
- Could this be for you? Q&A session

Housekeeping - Success

- As of now you all have 100%! Work hard, maintain it. I WANT you to succeed!
- Attendance is up to you, but I strongly encourage it. I will take attendance, but you will not be graded on it*. If you are unable to attend, let me know.

***week-to-week but you must attend your presentations/projects.**

- Please read: **Student Code of Conduct – Positive Learning & Living Environment (AOP 209)**
- Refrain from/understand: **Cheating, Plagiarism, Falsification, Misrepresentation, Fraudulent Behaviour**
- Communicate with me. I am understanding, accessible, and want you to succeed. Don't wait until you are in trouble.

- LATE POLICY: -100% per second on submissions & attendance (you may not start assignments/cs late)
- DO NOT USE ANY AI TOOLS IN THIS COURSE! I am not concerned with grammar/spelling, so do not use GRAMMARLY etc.
- Past ADRs: you may not sit beside a co-ADR group member

Housekeeping - Success

- Seat reservation policy: NO reserved seats, first-come, first-served; if there is an empty seat with terminal, you must use it; Login when you arrive to class, activate office etc.; no laptops
- No social media in class?
- No detectable phones; or leave class until next week
- If you need to talk, buy shoes etc. leave for 15 minutes at least before re-entering
- Do NOT interrupt presentations
- Pay attention during presentations
- No recording in class without my permission
- Testing on terminals only

Housekeeping - timetable

week	Theme	Objectives	Evaluation
1/2 – Apr 29/May 6	Introduction	Create plans, add details… MS Project	
3 – May 13	In-class Assignment#1 – 10%		
4 – May 20	Agile	Sprints, scrums	
5 – May 27	In-class Assignment#2 – 10%		
6 – Jun 3	Req. gathering	Business Obj. vs. DS, Stakeholder Engagement; Requirements Gathering; Framing/Scoping	
7 – Jun 10	Midterm Exam – 20%		
8 – Study Week	-		
9 – Jun 24	Overview/Req	DS vs…; AI/MLOps Lifecycle; Roles/responsibilities; Methodologies	
10 – Jul 1* -async?	In-class Assignment#3 – 10%		
11 – Jul 8	In-class Assignment#4 – 10%		
12 – Jul 15	Resources/Risks	Data sourcing, Team/Time/Budget allocation/Planning, Evaluation/Management	
13 – Jul 22	Case Study #1 -10%		
14 – Jul 29	Case Study #2 -10%		
15 – Aug 5 end 4PM	Final Exam – 20%		

Project Management Institute. Toronto

Project Management as a Career

Join us for our *free* virtual event on Wednesday, October 23, 2024. 7:00 to 8:30pm.

Agenda

- What is a Project Manager?
- Project Management job trends
- Pulse of the Profession - The Future of Project Work
- PMI Certifications
- “A Day in the Life” of a project management professional
- Could this be for you? Q&A session

M.S. Project: Management Skills for Planning and Controlling Projects

Assabet After Dark

Week One: Learning Objectives

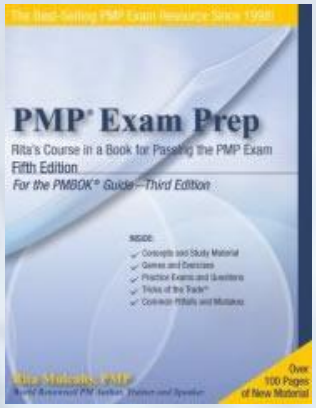
- We'll talk a bit about projects in general
- We'll practice using Microsoft Project to:
  - Create project plans that include your tasks, and your resources (people, equipment).
  - Organize and format your project details
  - Track actual work against the plan
  - Take corrective action when things get off track.

Week One: Projects Defined

- What is a project?
  - What are the types of projects that Microsoft Project would be useful for planning, scheduling, and controlling?
- A project is a temporary endeavor that has a beginning and an end. A project also produces a unique deliverable or end result. It takes:
  - Time
  - Resources
    - People
    - Equipment that costs money over time, or that has to be scheduled

Week One: Project Management

- Project Management as a profession
  - The Project Management Institute, PMI
    - Their web site is http://www.pmi.org/
    - The Project Management Professional Exam, the "PMP" exam
    - A Guide to the Project Management Body of Knowledge, the "PIMBOK"
  - Rita Mulcahy's PMP Exam Prep book is a best seller.
    - Her web site is: http://www.rmcproject.com/



Week One: Microsoft Project Uses

- Microsoft Project would be useful for scheduling:
  - A wedding
  - A movie shoot
  - A construction project
  - The First Night festivities in Boston
- It would be less useful for scheduling ongoing operations
  - The weekly staff schedules for wait staff at a restaurant
  - An endeavor that doesn't have an ending

Week One: Microsoft Project Uses

- Why use Microsoft Project?
  - As opposed to Microsoft Excel, for example
- Microsoft Project has some similarities to Excel. It's strength over excel is in its scheduling engine.
- The difference between a to-do list and a Gantt chart
- You'll see throughout this course that you can set when specific tasks on your to do list must start or end.

Week One

- You can set **dependencies** in Microsoft Project.
  - This task can't start until another task starts.
  - Or a task can't start until another task ends.
- You can also assign resources to tasks.
  - So, who does what.
  - Or, for equipment that you have a finite amount of, and you need to schedule it, you can tell with Microsoft Project if you've accidentally sent two film crews out at the same time, and you have only one camera.

Week One: Microsoft Project Uses

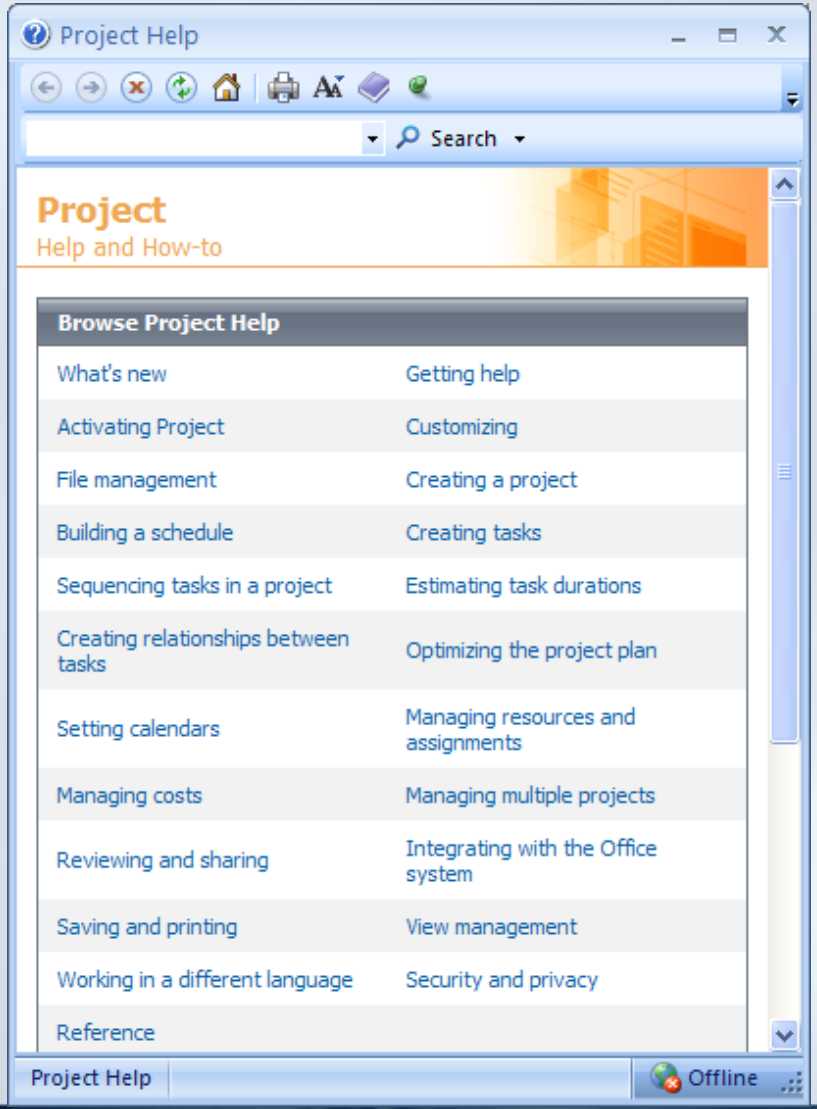
- Costs
  - You can track:
    - Hourly costs for employees
    - Equipment rentals
  - And easily see what large chunks of your project will cost
- You can also track change with Microsoft Project.
  - So, if someone wants a change that will delay a single task by only one day, but a lot of other tasks can't start until it's complete, Microsoft Project could automatically take into account the ripple effect, and show you your new completion date.

Week One: Getting Help

- Tips for getting help with Microsoft Project
  - Microsoft.com has tips and tutorials
    - Go to www.microsoft.com and search for "Microsoft Project" to find the Project home page, as well as a free 60-day trial of the latest version.
    - The direct link for it: http://office.microsoft.com/en-us/project/FX100487771033.aspx
  - In Microsoft Project, under the Help menu, choose "Microsoft Office Project Help." That opens up the Project Help window.

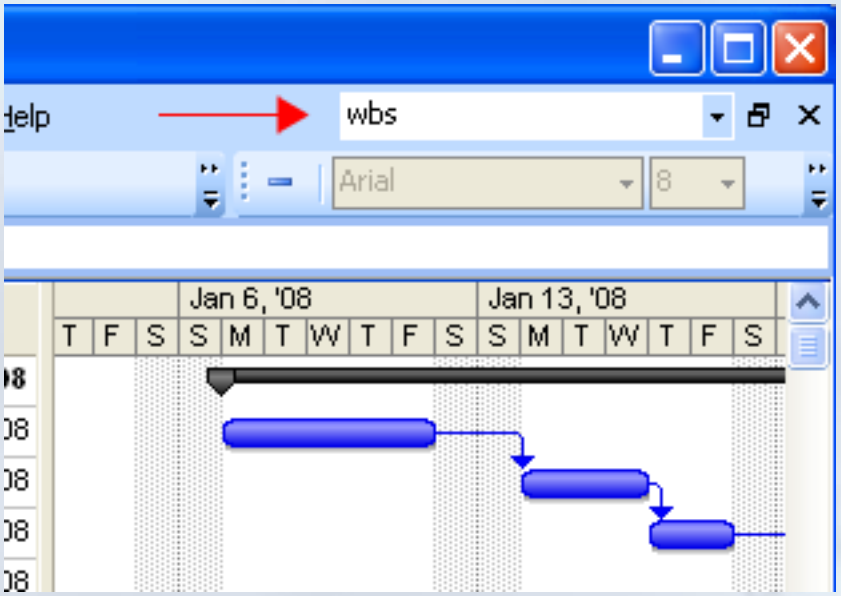
Week One: Getting Help

- The Project Help window



Week One: Getting Help

- You can also get this window by typing text in the search box, and hitting the enter key.



Week One: Getting Help

- Microsoft also has an extensive knowledgebase at:
  - support.microsoft.com
- They also have Microsoft Product Support Services, at:
  - support.microsoft.com/gp/overview/

Week One: Chapter One

- Managing a simple project
  - Chapter one learning objectives
    - Start project standard, identify the major parts of the project window
    - Use views
    - Use reports
    - Create a project plan and enter a project start date.
    - Set the working and non-working time for a project.
    - Enter a project plan’s properties.

Week One: Chapter One

- Now, it's important to consider that Microsoft Project is just a tool that can help you manage projects. Before you can get started with Microsoft Project, you have to consider the following things about your project:
  - Your task list. What tasks must be performed? In what order?
  - Anything that's not in scope is out of scope. Anything that's not on your task list ***will*** be forgotten.

Week One: Chapter One

- When should your tasks be performed?
  - When and in what order are not necessarily the same. Dependencies.
  - Who will complete the tasks?
  - How much will it cost?

Week One: Appendix A

- Let's digress into Appendix A, "A Short Course on Project Management."
  - The PIMBOK's definition of a project:
    - "A temporary endeavor undertaken to create a unique product or service."
  - It could be a week, it could be a year.
  - It has to have an end date, even if the end date is flexible, or unknown.
  - Resources, such as equipment and people, need to do work.
  - They require planning, rather than being spontaneous endeavors.

Business Decision-making

- All projects have in common that they are trying to accomplish **something**
- Either create a product, deliver a service, make a decision, offer information…
- This is typically accomplished by breaking down a complex problem into smaller steps that are each easier to solve

Business Decision-making

- All steps, regardless of size, require informational and analytics supports
- BI systems rely on some form of Data Warehousing to fuel insight and supporting managerial decision-making
- Business Information falls under:

  descriptive: the problem's *what is/was*

  predictive: "" *what will/would*

  prescriptive: *what needs/should be done*

Stakeholders

- Stakeholders are anyone/thing connected to the project whose considerations are important to outcomes, methods, successes
- A stakeholder can be a person:

  shareholder, CEO, employee, community member…(in AI: end-users, data scientists, developers)

- A stakeholder can be an entity:

  governmental body (e.g. EPA), another business (B2B), trade association… (in AI GDPR)

Stakeholders

- Stakeholders have concerns over the project, company, outcomes…

  e.g. budgets, compliance (e.g. tax laws), impacts (e.g. pollution concerns)…

- Expectations can be aligned (common desire) or non-aligned (competing or unrelated)…

  e.g. saving on budget will help the company and the client if the savings are split between profit and savings

  e.g. saving on budget might increase company profit but not affect client tax burden

  e.g. saving budget may decrease government tax revenue

Stakeholders

- Stakeholders are not all equal

  Some have greater influence on the project

  e.g. GDPR > CEO > Data Scientist

  Some may impact the project differently

  e.g. If Data scientist quits, that creates a problem and the hierarchy may need shifting/managing

- Establish stakeholder priority according to influence, power, liability

Stakeholder Expectations

- Expectations are dynamic (can change over time – quickly in AI) and require management
  - e.g. saving on budget helps the client, but then they realize they need to speed up the timeline, so more workers need to be hired reducing that savings
  - e.g. client understands the project deadline is set, but then there is a worker strike and the project will be late

- Expectations need to be managed
  - -preferably as soon as possible (communications)
  - -transparently/honestly (reputational harm is real!)
  - -while preserving relationships (all walk away happy)
  - -hierarchically (primary, secondary…priority stakeholders)

Managing Stakeholder Expectations

- Managing Expectations requires:

-frequent communications (before, during (updates), after (outcomes)) to build/maintain trust/transparency and prove reliability

-realism ("it is better to under promise and over deliver than to overpromise and under deliver" vs. just tell the truth)

In many systems there is a trade-off: speed, $, quality –pick two! A client needs to understand the trade-offs so that if there are decisions to be made, they can offer insights into their priority. Clients need to know that AI changes quickly and they should prepare to adapt.

Managing Stakeholder Expectations

- Managing Expectations requires:

-exhaustive communications

(All parties must be heard. Sometimes they may wish to be silent, but it is important to have their view known.) In AI there is a wide, divergent understanding of technology. All must be on the same page. AI concepts/jargon should be simplified, benefits, limitations, and risks understood.

-dispute resolution infrastructure *ahead* of time

It is important while heads are cool, to set up a robust system for conflict management which should have escalation steps, authority control, default positions, timelines, procedural guidelines and be adaptable

Managing Stakeholder Expectations

E.g. AI-powered healthcare

WHO wishes to create an AI diagnostics system (using X-rays, MRIs, and CT scans to identify illnesses). The hope is to improve accuracy, patient care and quality of life). The team is multidisciplinary including data scientists, developers, medical professionals and government bodies and benefactors –and of course patients).

Outline the stakeholders.

Are they all aligned?

How do we manage expectations?

Managing Stakeholder Expectations

- **WHO Executives**

-want higher accuracy, less medical errors, increased branding

- **Doctors**

-afraid for jobs (AI displacement), want good patient outcomes

- **Patients**

-want faster/accurate diagnoses, and good outcomes

- **Authorities**

-want safe/reliable AI, complying with medical regulations

- **Data Scientists/Developers**

-want to increase accuracy, branding

- **Donors**

-want to maximize impact for their dollar

Managing Stakeholder Expectations

- **Realistic Goals**

DS will work with CEOs to convey best/worse case accuracy, timeline, costs. CEO will tell donors, patients that they can expect…and doctors that the system will likely not replace…

- **Updates via demo/transparent communication**

Regular progress can be demonstrated throughout the software lifecycle (prototyping to release) to show donors and physicians what they can expect and progress that is not coming out of thin air. This also provides opportunity to input into the decision-making process, and address concerns.

Managing Stakeholder Expectations

- **Doctor feedback**

Is used in dev so that accuracy is increased and they can see and understand fears regarding their jobs.

- **Ethicals**

WHO will have to reach out to different jurisdictions such as the UN, FDA, CDC, ECDC, NHS, CIHR, CCDC…and explain the AI system meets ethical/legal standards. They should emphasize patient safety, data privacy and share data and preliminary findings.

Managing Stakeholder Expectations

- **Risk Management**

After preliminary findings, AI limitations are revealed. All stakeholders must be warned so they can work together to iterate and improve.

- **Addressing Doctors**

The CEO and DS reach out to physician bodies and show how the AI makes their job easier so they can work on the harder, less mundane tasks.

-they are handheld through the process.

-stethoscope/Merck manual did not replace physicians

Managing Stakeholder Expectations

Stakeholder	Best case	Likely	Worst case
WHO			
Doctor			
Patient			
Authorities			
Technical teams			
Donors			

Stakeholder Outcomes

Stakeholder	Best case	Likely	Worst case
WHO			Money loss, reputational harm, law suits, angry donors
Doctor	Free time/better care on hard cases		Job loss
Patient	Faster, cheaper, better, accessible care		
Authorities	All laws met	Negotiation, updates	Non-compliance
Technical teams			
Donors	High accuracy…		Money wasted

Managing Stakeholder Exercise

Explain how to handle the variances. Identify who tells/does what to whom. Was any of it preventable?

-The top donor is indicted for fraud and cannot deliver 30% of the funding.

-The top donor is indicted for fraud, but wants WHO to testify on their behalf.

-WHO leadership changes. The new CEO is interested in community-led care and not technology.

-Doctors go on strike in protest.

-Doctors sue WHO in court over false accuracy claims.

-Patients in rural Outerpotamialand refuse medical care "from a robot".

-Patients refuse to pay higher taxes/fees in protest of AI-doctors.

-The FDA leader had no authority to greenlight the project, halfway through.

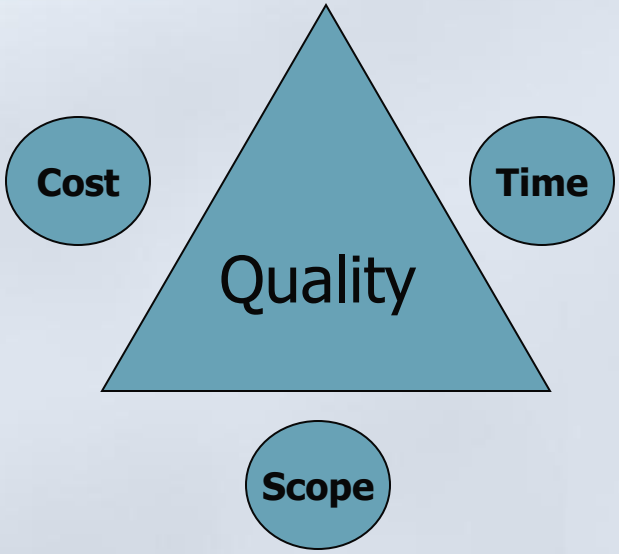
-The NHS has announced new measures to safeguard against AI error. All results need to be vetted by a human.

-The developer team lead gets hired by a rival company.

-The developer team lead loses her laptop that had the code/data.

Week One: Appendix A

- There's a unique deliverable produced.
- The "triple constraint," or the "project triangle."



Week One: Appendix A

- When working with your project sponsor, it's a good idea to define which of the three things on the project triangle are fixed, and which are flexible.
- Everything you do in Microsoft Project will be striking a balance between time, cost, and scope.

Week One: Appendix A

- Time:
  - For the Fourth of July fireworks, the deadline would be more important than the cost, or than the scope.
  - You'd rather have a smaller show on the Fourth of July than a great show in August.
  - And you might pay more than planned if you had to, to get the fireworks on the Fourth.

Week One: Appendix A

- Cost
  - Your cost will include hourly pay for people who work on your project
  - Equipment rentals
  - Materials that get used throughout the project
  - All the other events and issues that cost money throughout your project.
- Cost constraints
  - A fixed price contract
  - You can only use in-house people in your organization

Week One: Appendix A

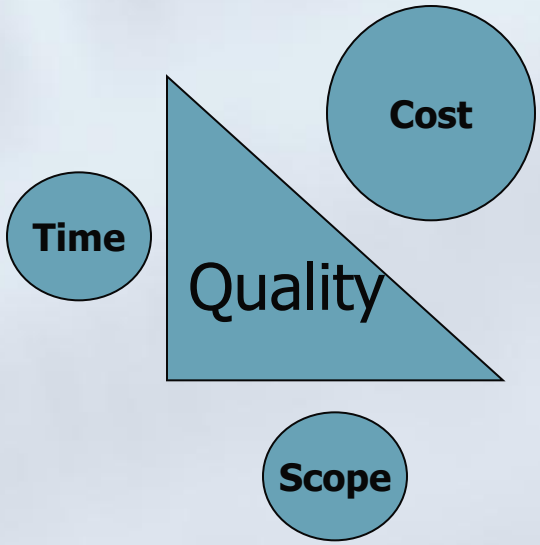
- Cost constraints, cont'd:
  - You've been allocated a fixed amount to do the project. A $5,000 grant to create a public art installation.
- Scope
  - Product scope versus project scope
    - Product scope: the intended quality, features, and functions of the product
    - Project scope: everything that needs to get done in order to produce the product.

Week One: Appendix A

- Scope constraints
  - Engineering projects would have very finely documented specifications. Let's say your company has won a contract to develop an automotive product that has exact requirements, with physical measurements down to 0.01 mm.
  - You're constructing a building with a height restriction of 50 feet.
  - You have to use in-house services, and they have their own product management methodology.

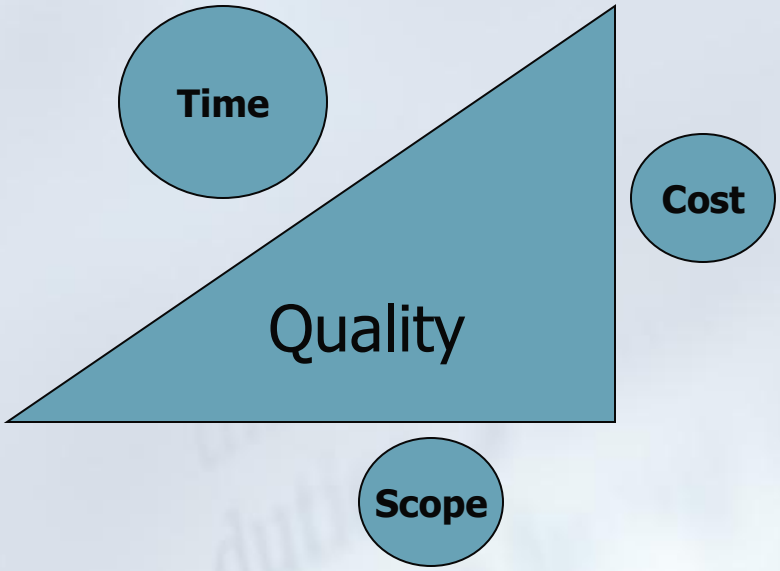
Week One: Appendix A

- When the project triangle gets skewed:



Decreased scope and time, but higher cost.

Or…



If your cost is decreased, you may have to decrease your scope, and increase your time.

Week One: Appendix A

- If the duration (time) of your project schedule decreases
  - You may have to increase the budget (cost), because you may have to hire more resources to do the same work in less time.
    - Watch your project scope and quality
- If the budget (cost) decreases
  - You might need more time.
    - Let's say you can't hire the ideal number of people, or people with the best skills.
    - You might have to use lesser quality materials. Try to maintain a balance between cost, scope, and quality.

Week One: Appendix A

- If your project scope increases
  - You might need more time or money.
    - **Scope creep**
      - Changes to the project scope after it's been agreed upon, quoted, and scheduled.
    - Have a formal procedure for managing change requests.
      - Who authorizes them?

        Outline the chain of command throughout your project team, and make it clear with your sponsor who to go to.
      - What actions should you take as a team to decide if you can (not) accommodate the change?
      - How should your project sponsor request them?

        You can give them a formal scope change request form.
      - Document what the turn-around time will be for a yea or nay, and that changes to the scope may result in changes to the time, cost, and quality of the project.

Week One: Appendix A

- Managing Your Projects with Project (page 482)
  - Track information about the work, duration, and resource requirements of your project
  - Visualize your project plan
  - Schedule tasks and resources
  - Exchange project information with stakeholders.
  - Communicate with resources (staff) and other stakeholders.

Week One: Back to Chapter One

- The exercises in this book focus around a fictitious film production company, Southridge Video and Film Productions.
  - There are no practice files for chapter one.
- Microsoft Project Standard versus Microsoft Project Professional. We're using the *Standard* version.
  - Part 4 of our book covers the 'Professional' version.

Week One: Chapter One

- A big advantage that Project has over other software applications, like Excel or like Visio, is that it has a scheduling engine, a brain.
- If you have a project with 100 tasks in it, and you change the duration of task 50, it will have a ripple effect. It will reschedule your other tasks for you.
- You can immediately tell your sponsor how the change will impact, the time and cost.

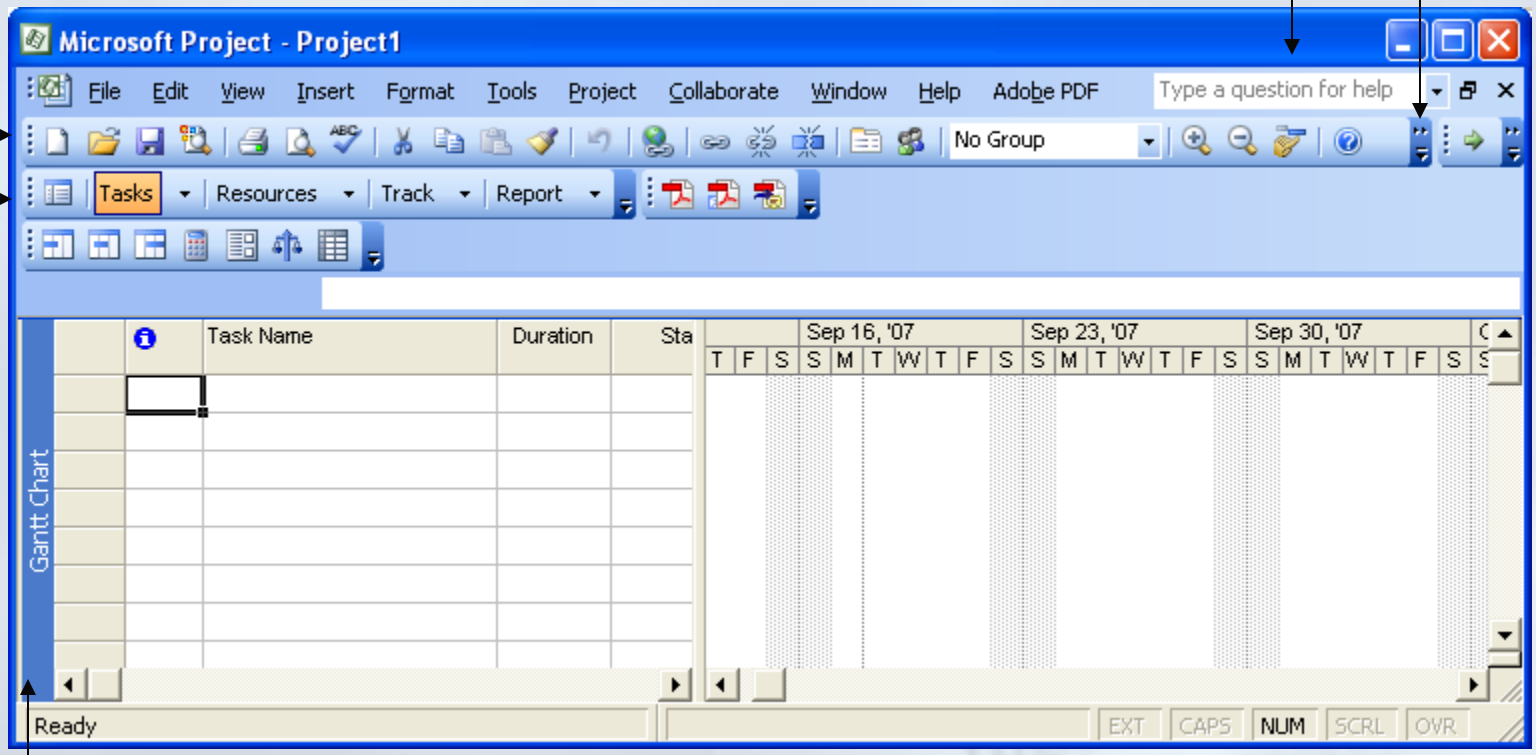
Week One: Chapter One

- Starting Project Standard
  - We're on page 6
- On your taskbar, click the Start button.
- Go to All Programs > Microsoft Office > Microsoft Office Project 2007.
- Your screen will look similar to this:

Week One: Chapter One

Click the down arrow to see more tools

Search for help



Toolbars

Menu Bar

Gantt Chart view

The name of the active view appears here.

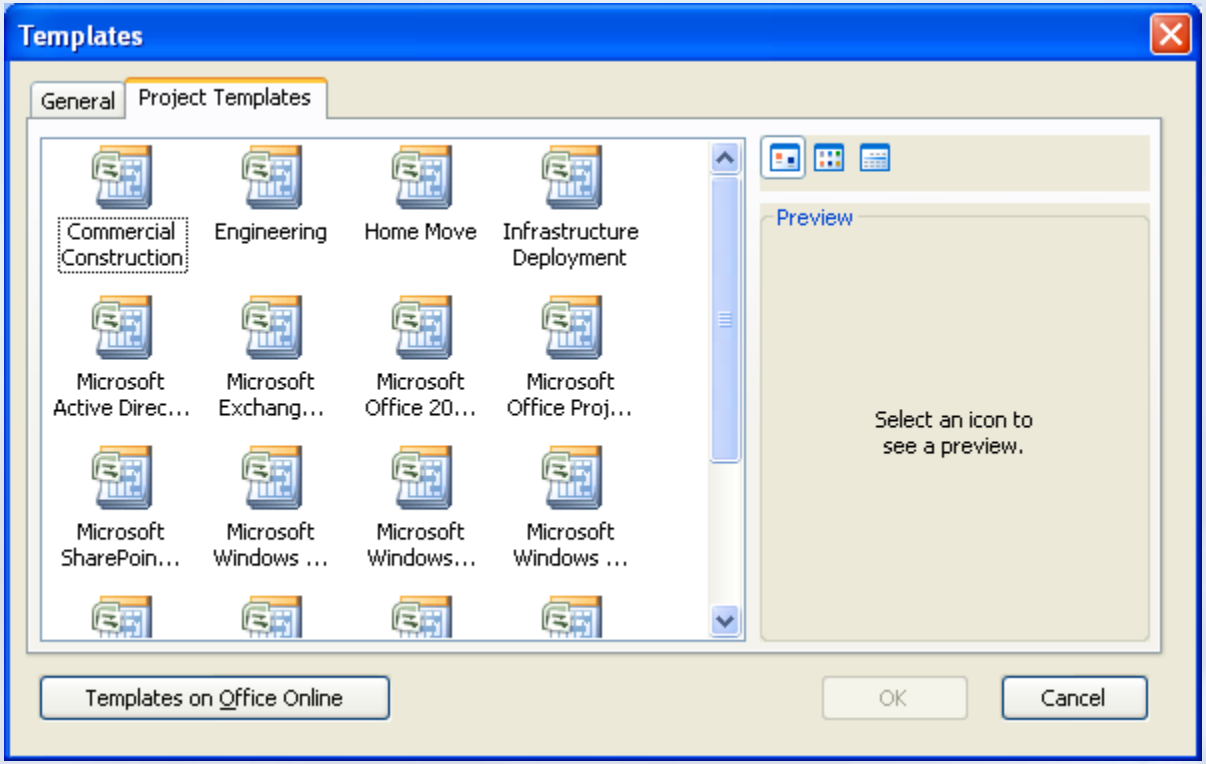
Week One: Chapter One

- The toolbars can change. Project automatically customizes them, based upon which tools you use most.

- Project is installed with a lot of templates to get you started.
  - On the File menu, click New.
  - Under Templates, click On computer.
  - Click the Project Templates tab.

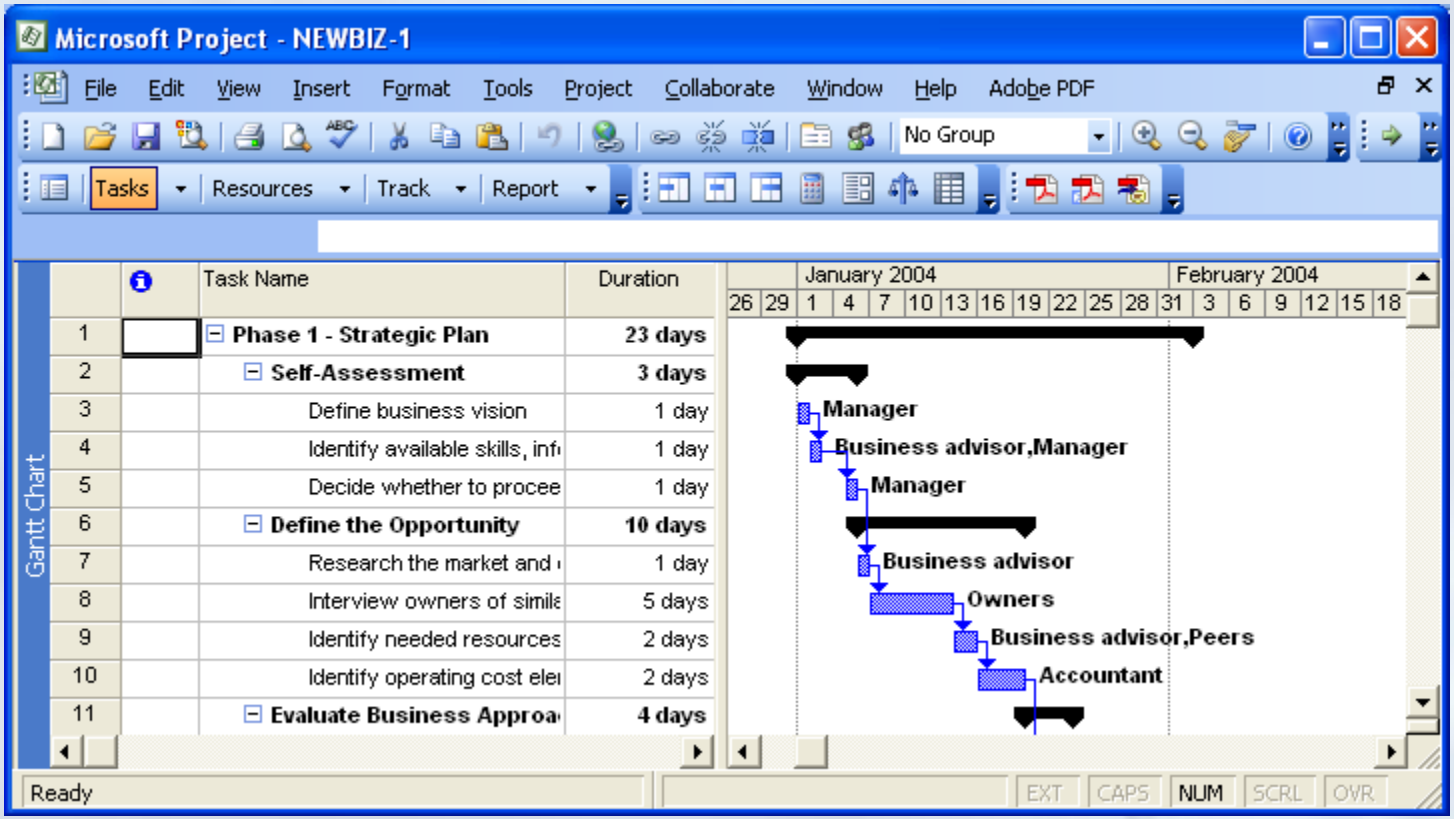
Week One: Chapter One

- You'll see this window:



Week One: Chapter One

- Click New Business, and click OK. Your screen should look like this:



Week One: Chapter One

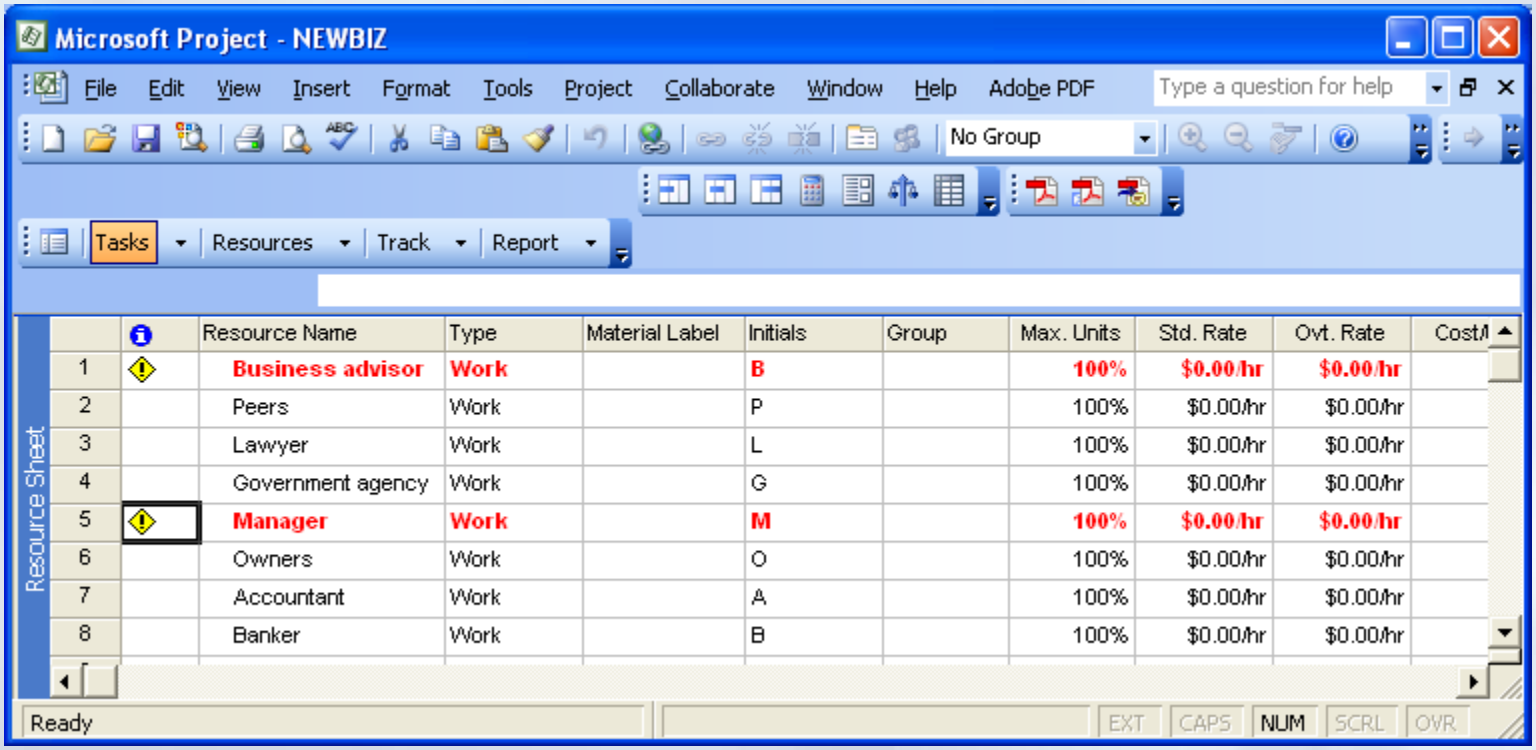
- The Project Guide
  - View menu > Turn on Project Guide
  - Or, under the Tools menu > Options > Interface tab, check the checkbox Display Project Guide.
  - Note: in the book, we're skipping pages 11-18, on "Starting Project Professional," since we're working with Project Standard.

Week One: Chapter One

- Exploring Views
  - Click on the View menu, and select the various views.
  - The Gantt chart view is the one that you'll likely use the most often.
  - Try the View menu > Resource Sheet.

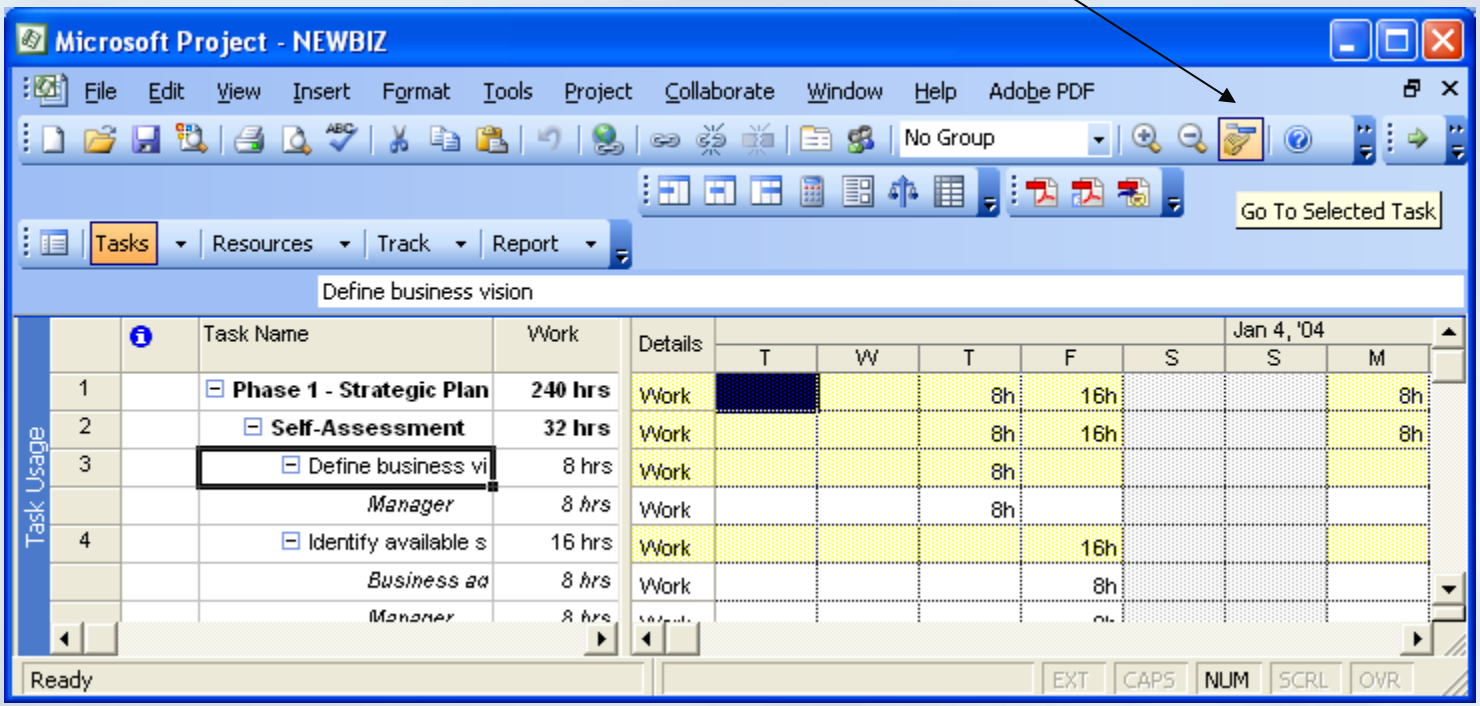
Week One: Chapter One

- In this example, the resources are people, but they're generic. "Lawyer," instead of the name of a specific lawyer.



Week One: Chapter One

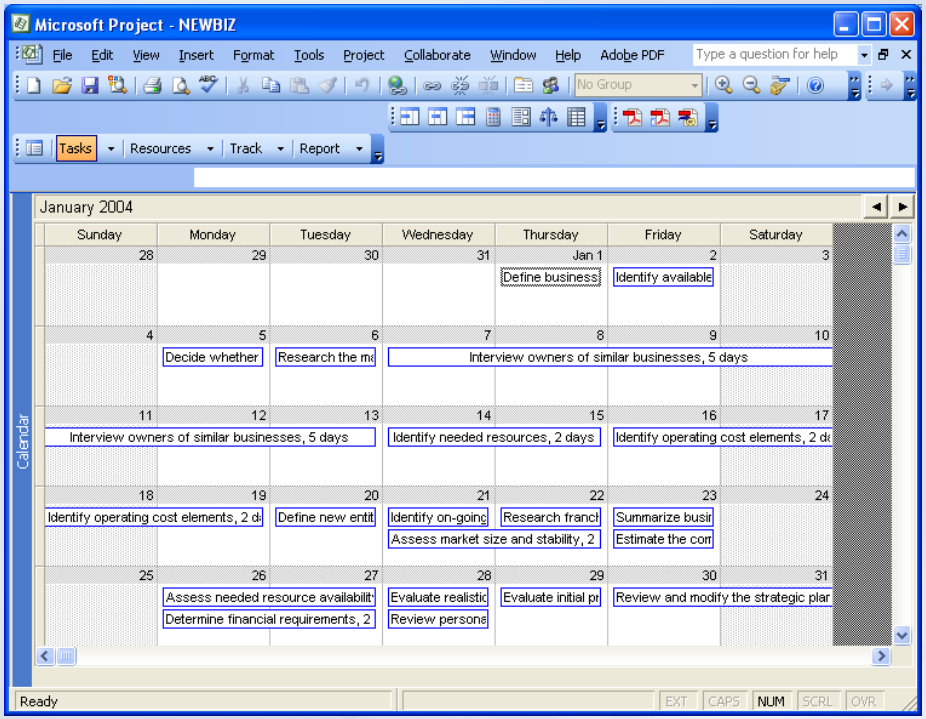
- On the View menu, try Task Usage.
- Click on task 3, Define Business Vision. Then click on the Scroll to Task button.



The timescale appears.

Week One: Chapter One

- Try the View menu > Calendar.
- This would be a good view to print and share with your project sponsor. It doesn't show dependencies, or who does what, but it's simple and easy to read.



Week One: Chapter One

- Let's take a look at the Network Diagram
- View menu > Network Diagram.
- In project management practice, this is also known as the Activity on Node network, or an AON.
- We'll see a bit later on that the AON helps you to see the dependencies that tasks have on one another. Which tasks have to be complete in order for other tasks to start or finish.

Week One: Chapter One

- Combination views
- On the View menu, click Gantt Chart.
- On the View menu, click More Views.
- In the Views box, click Task Entry, and then click the Apply button.
- You'll see the Gantt Chart at the top of the Project window, and the Task Form view at the bottom.

Week One: Chapter One

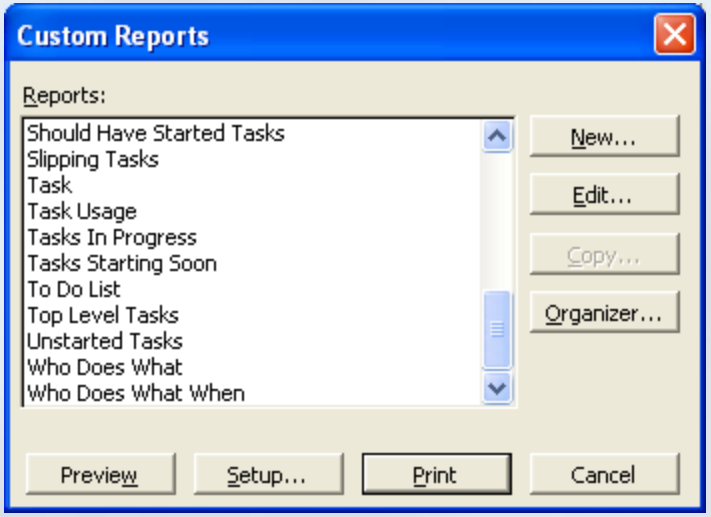
- Up in the Gantt chart view, select task 3, Define Business Vision. You'll see the details about that task in the Task Form.
- Amongst other details, we see the "Resource Name" here, and how much work the resource has been assigned to the task.
- Also, you can display any two views you want by clicking on the Window menu, and choosing Split. Undo it by clicking back on the Window menu, and choosing Remove Split.

Week One: Chapter One

- Exploring Reports
  - There are two types of reports in Project:
    - Reports that are for printing
    - Reports that are for exporting Project data to other software applications, like Excel and Visio.
  - On the Report menu, click Reports.
    - Note: In Project 2003, this was under View > Reports. There was not a Reports menu.
  - Choose Custom, and then click the Select button. You'll see the Custom Reports dialog box.

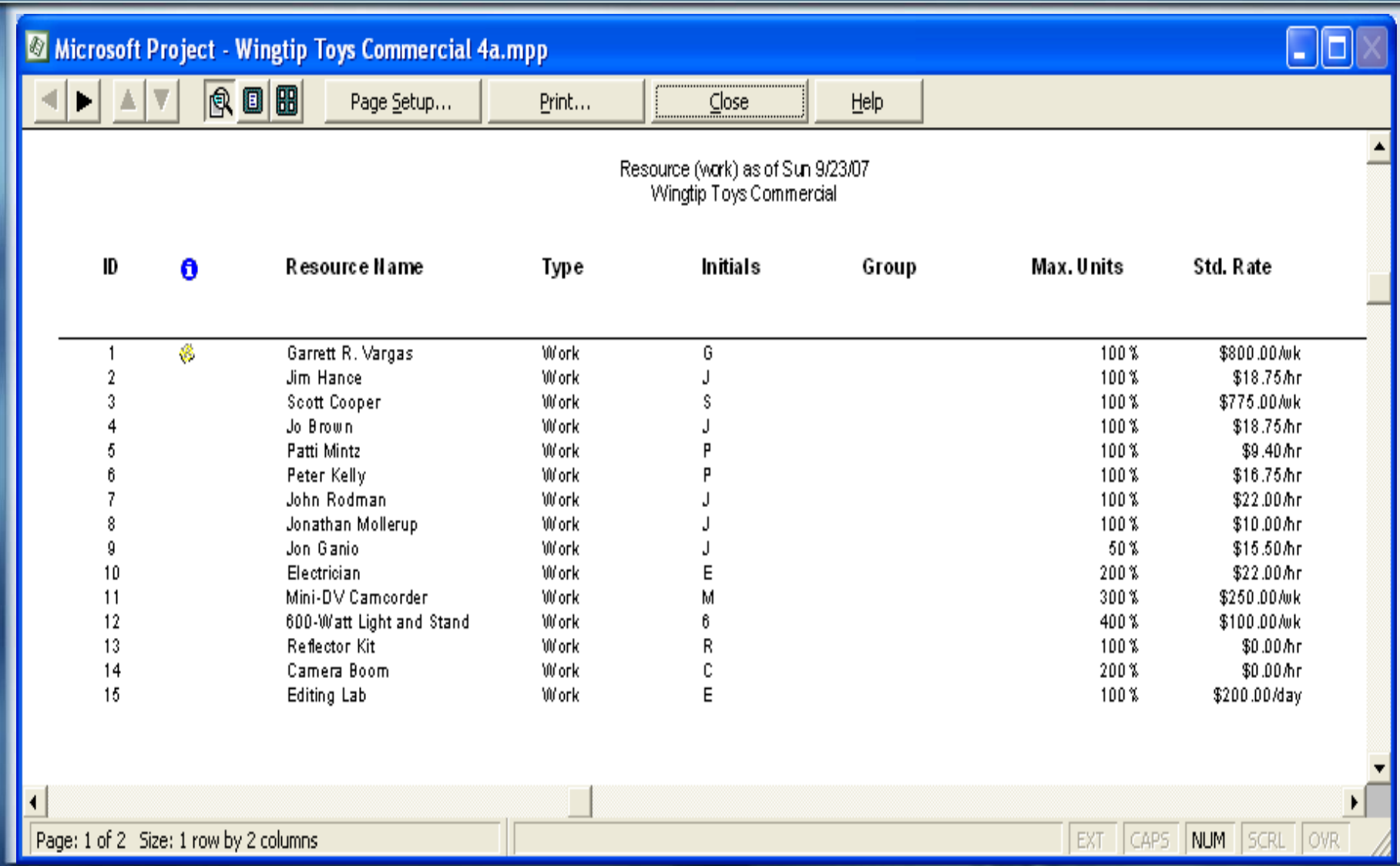
Week One: Chapter One

- There are lot of great reports in here:



- Choose Resource > Work > Preview.

Week One: Chapter One



ID	Resource Name	Type	Initials	Group	Max. Units	Std. Rate
1	Garrett R. Vargas	Work	G		100%	$800.00/wk
2	Jim Hance	Work	J		100%	$18.75/hr
3	Scott Cooper	Work	S		100%	$775.00/wk
4	Jo Brown	Work	J		100%	$18.75/hr
5	Patti Mintz	Work	P		100%	$9.40/hr
6	Peter Kelly	Work	P		100%	$16.75/hr
7	John Rodman	Work	J		100%	$22.00/hr
8	Jonathan Mollerup	Work	J		100%	$10.00/hr
9	Jon Ganio	Work	J		50%	$15.50/hr
10	Electrician	Work	E		200%	$22.00/hr
11	Mini-DV Camcorder	Work	M		300%	$250.00/wk
12	600-Watt Light and Stand	Work	6		400%	$100.00/wk
13	Reflector Kit	Work	R		100%	$0.00/hr
14	Camera Boom	Work	C		200%	$0.00/hr
15	Editing Lab	Work	E		100%	$200.00/day

Week One: Chapter One

- The most you can do is print this report. You can zoom in and out, and flip pages in it. It's really a print preview window.
  - You can't use it for data entry.
  - That what all of the reports in Microsoft Project are like.
  - Views let you edit the information.
  - Reports are for printing it.
  - Click Close > Close to close out of the Reports dialog box.

Week One: Chapter One

- Back under the Reports menu, click Visual Reports.
  - You have to have Excel installed for this to work (Excel 2003 or later).
  - I believe that this is new as of Project 2007.
- You'll see a list of predefined visual reports in Project.
- Project can export to either Microsoft Project or Microsoft Visio, and then use those applications to create fancy stuff.

Week One: Chapter One

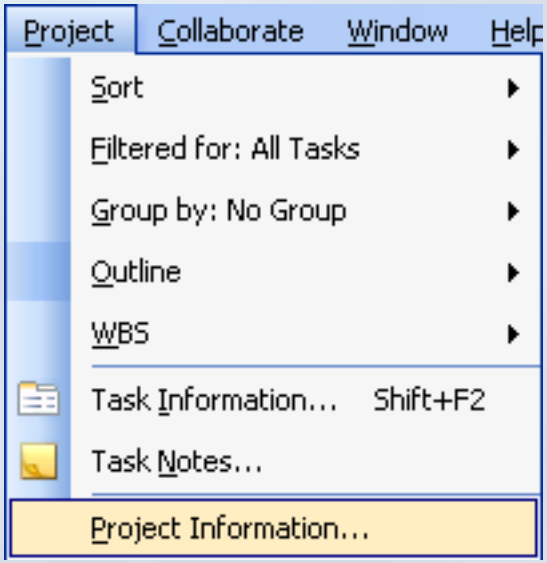
- Choose the Resource Remaining Work Report, and then click View.
- If all goes well, you should see a bar chart in Excel.
- Close Excel, and in Project, click Close to close the Visual Reports dialog box.

Week One: Chapter One

- Creating a new project plan
  - Specify only the start date, or the finish date (in most cases)
    - Project will calculate the other date for you, once you give it the durations for your tasks
  - Usually you'll use the start date. An exception would be an event with a very important end date, like the Fourth of July Fireworks, or the First Night festivities.

Week One: Chapter One

- Let's create a new project plan
  - On the File menu, click New. In the New Project pane, click Blank Project.
  - On the Project menu, click Project Information.

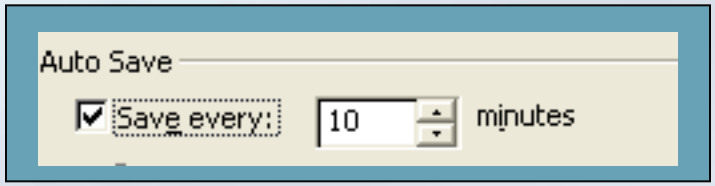


Week One: Chapter One

- Go to the Standard toolbar, and click Save.
- On your computer, there should be folders for all of the practice files that correspond with our book. Hopefully you'll already be at the My Documents folder. Browse to here:
- My Documents\Microsoft Press\Project 2007 SBS
- The full path is:
- C:\Documents and Settings\Jennifer\My Documents\Microsoft Press\Project 2007 SBS
- Open the Chapter 1 Getting Started folder
- In the File Name box, type Wingtip Toys Commercial 1, and click Save.

Week One: Chapter One

- To have Project autosave, for example, once every 10 minutes:
  - Go to the Tools menu > Options, select the Save tab, and set this:



Week One: Chapter One

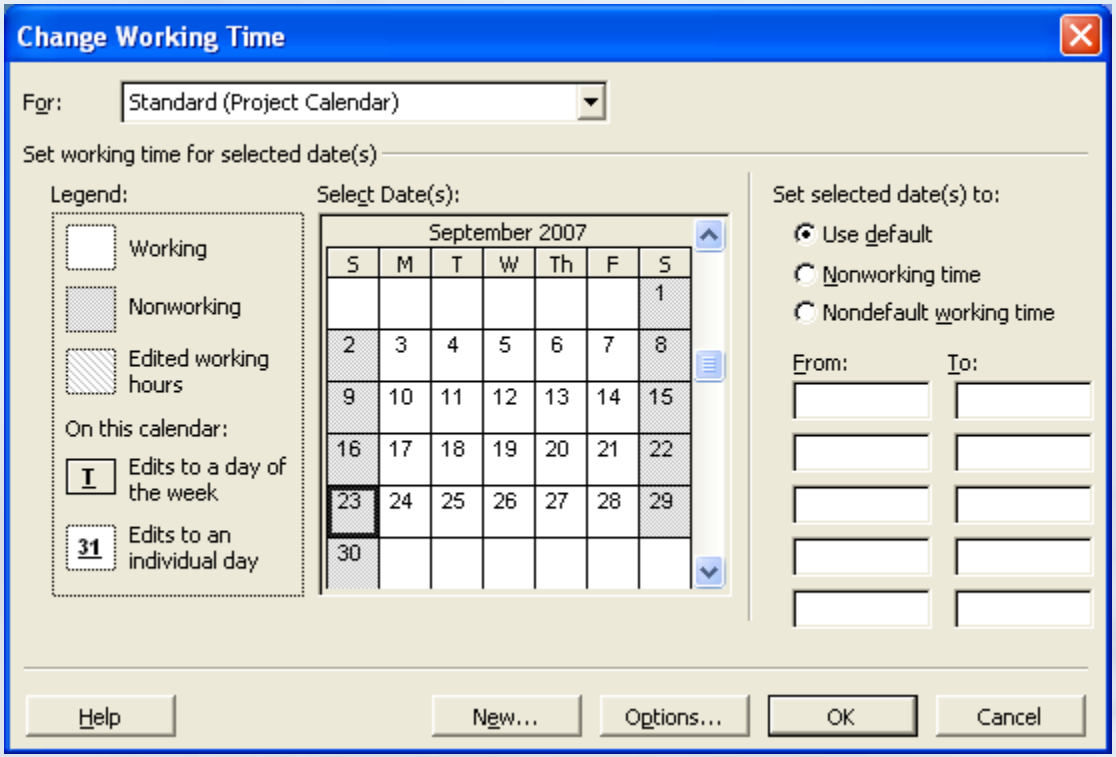
- Set Nonworking Days
  - We'll be using the project calendar.
  - We'll set the working time and the non-working time
  - Do you have a second shift, or an overnight shift? Will people be working on the project on weekends?
  - You'll want to put in holidays, vacation days, and any other breaks.
  - How finite you need to be here, though, depends a lot on the types of projects you're managing.

Week One: Chapter One

- For example, a complicated surgery, involving multiple doctors, might require very tight scheduling.
- For a software development project, that's taking two years, on the other hand, you might only need to schedule tasks down to the week, not down to the day or down to the hour.
- On the Tools menu, click Change Working Time.

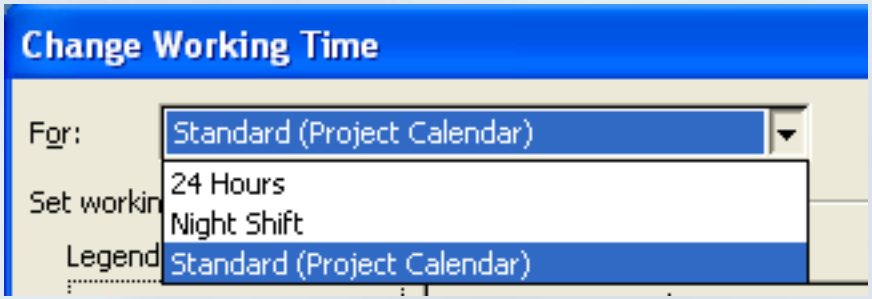
Week One: Chapter One

- You'll get this dialog box:



Week One: Chapter One

- In the "For calendar" drop-down menu, you have three choices:



- 24-hours – there's no non-working time
- Night shift – Monday night through Saturday morning, 11pm – 8am
- Standard – 8am to 5pm Monday through Friday

Week One: Chapter One

- Leave the calendar set at "Standard (Project Calendar)
- Let's make an exception – everyone has January 28th off, for a morale event.
  - In the Exceptions tab, under the Name field, type "Staff at morale event."
  - In the Start field, type 1/28/08, and then press Enter (on your keyboard).
    - Or, you can select the date in the calendar, or you can select it from the drop-down menu in the Start field.

Week One: Chapter One

- That date's now scheduled as non-working time for this project.
- Click OK to close the Change Working Time dialog box.
- Scroll to Monday, January 28th in the Gantt Chart view. You'll see that it's greyed out.
- A handy thing:
  - Use the zoom buttons to zoom in and zoom out on the Gantt Chart view, to make it easier to find that date. 

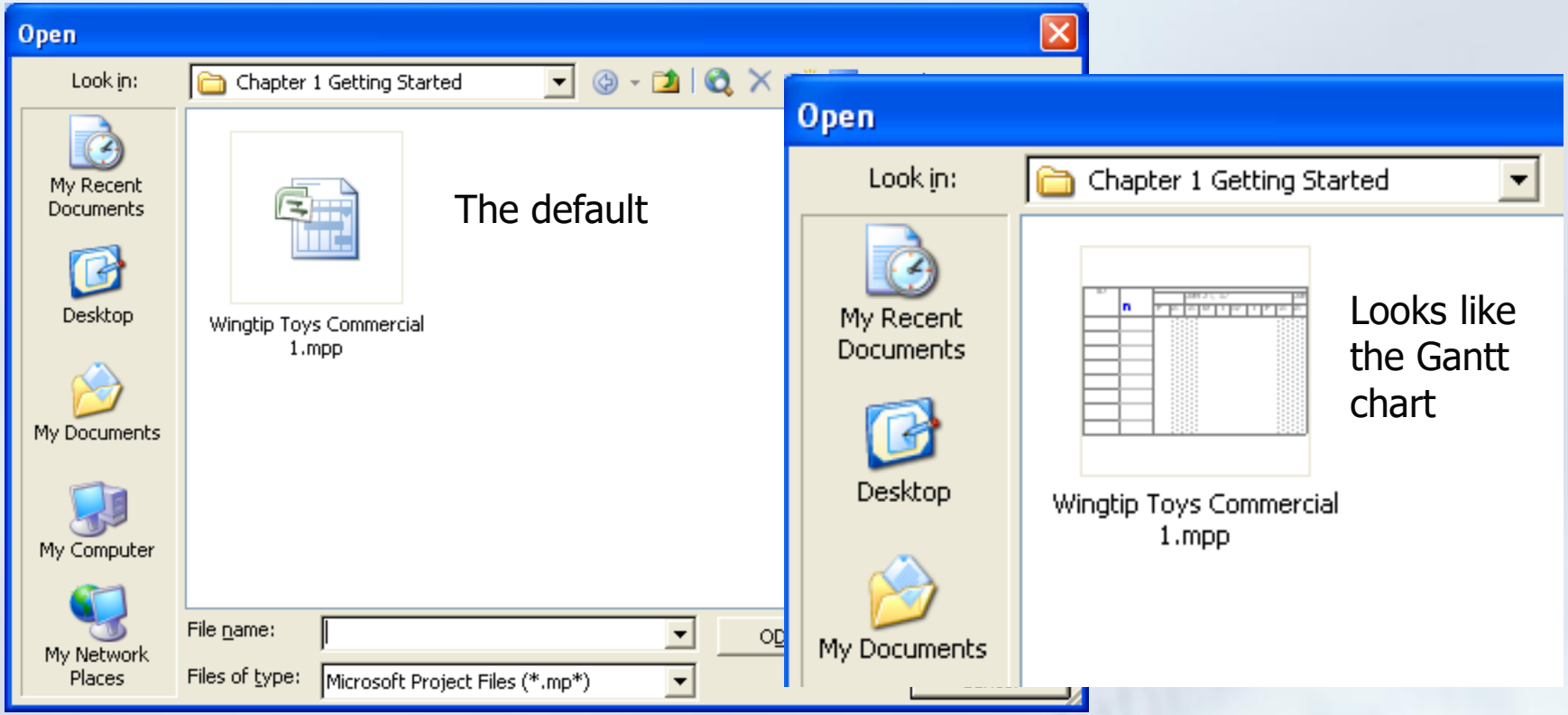
Week One: Chapter One

- Entering Project Properties
  - These are used in the headers and footers of reports that you print from Project.
  - They're things like statistics, how many times the file has been revised, or things you'd want to record, like the project manager's name.
    - On the File menu, click Properties.
    - Make sure the Summary tab is selected.
    - In the Subject box, type Video Production Schedule.
    - In the Author box, type your name.
    - In the Manager box, type your name, or your manager's name (make stuff up…).

Week One: Chapter One

- In the Company box, type Southridge Video.
- Select the Save preview picture check box.
  - What this check box does:
  - Without it checked, the next time you open this file, you'll see the default project icon:

Week One: Chapter One



- If you check that checkbox, though, it generates a preview image that shows the first few tasks of the project in it.

Week One: Chapter One

- Click OK to close the dialog box.
- Close the Wingtip Toys Commercial 1 file.

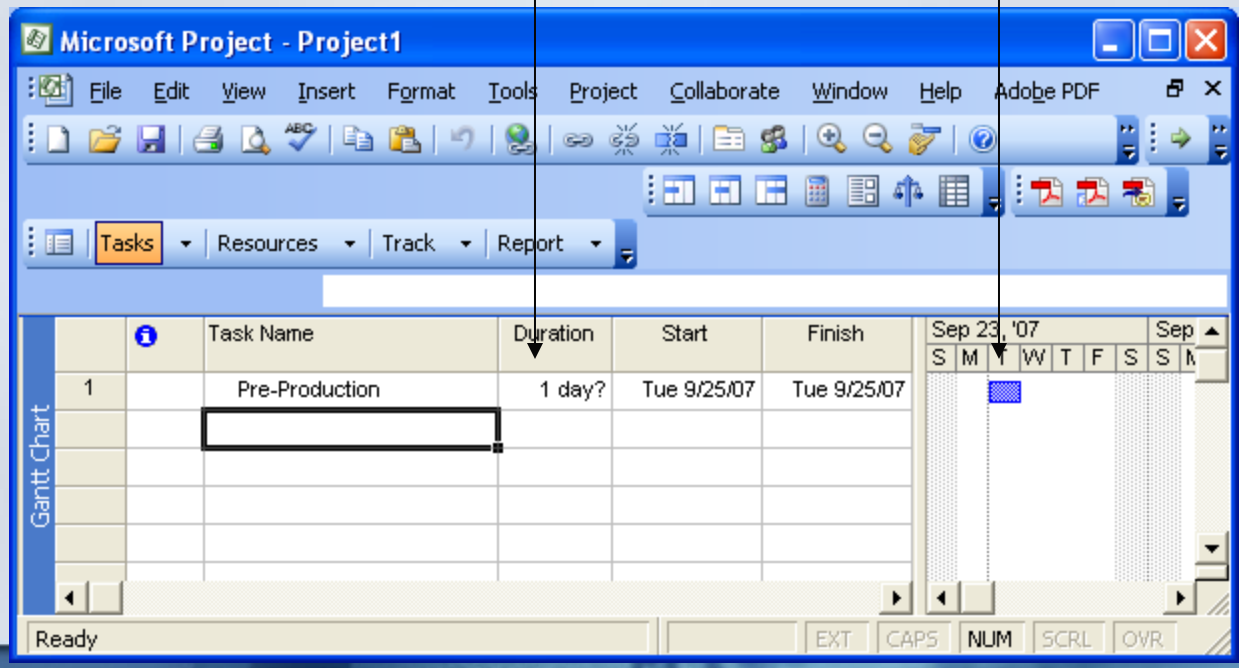
Week One: Chapter Two

- 3. In the first cell directly below the Task name column heading, type Pre-Production and then press the enter key on your keyboard.

Default estimated duration

Bar representing task

ID number. Now, that represents the order in which tasks are *entered*.



Week One: Chapter Two

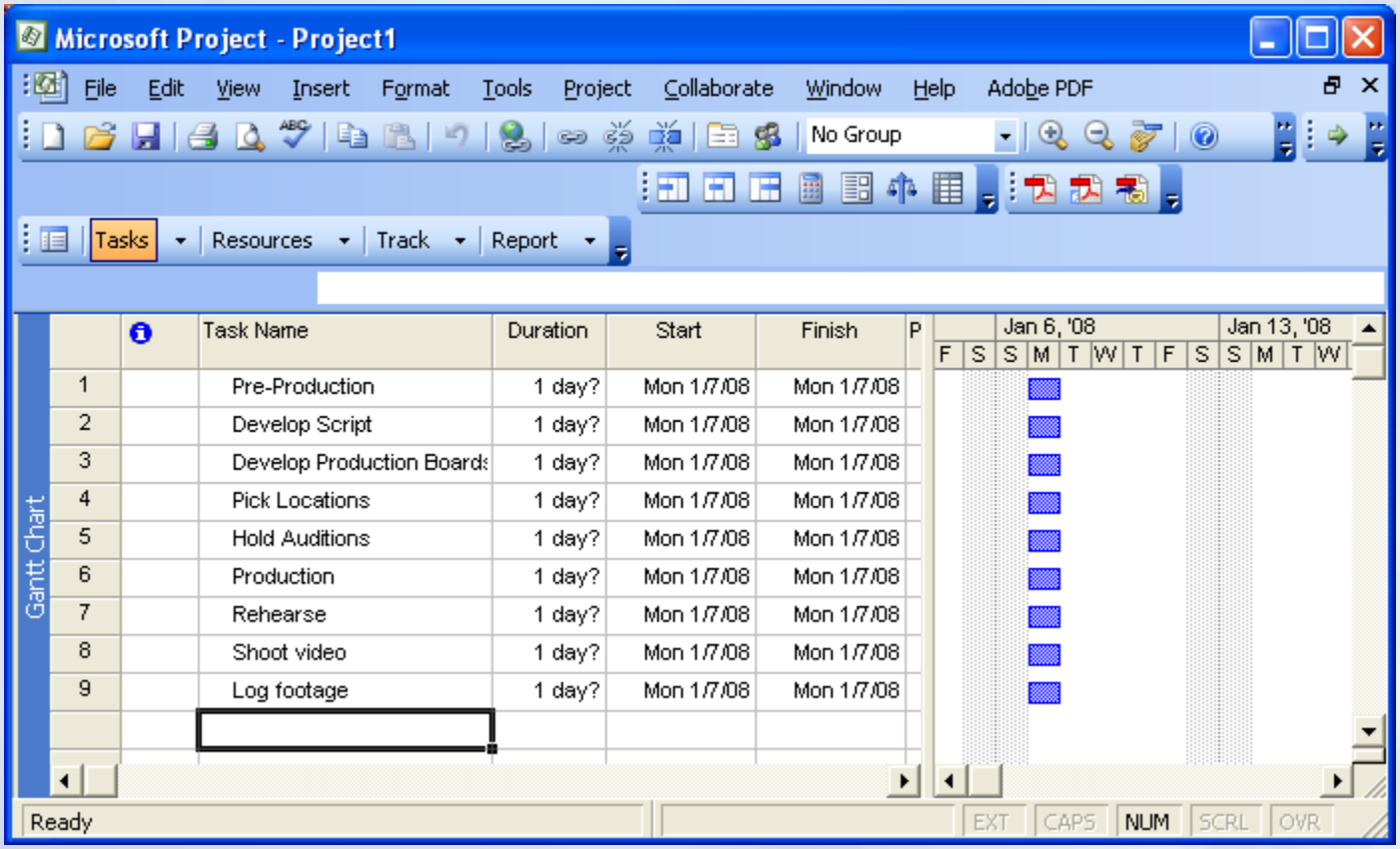
- The duration – the question mark means it's an estimate – you haven't entered anything in for it, so it defaults to:
  - 1 day?
- The default start date is the same as the project start date.

Week One: Chapter Two

- Enter the following task names below Pre-Production, pressing Enter after each one:
  - Develop Script
  - Develop Production Boards
  - Pick Locations
  - Hold Auditions
  - Production
  - Rehearse
  - Shoot Video
  - Log Footage

Week One: Chapter Two

- So, your Gantt chart view should look like this:



Week One: Chapter Two

- Estimating Durations
  - Default
  - Poll
  - Past History
  - Guess?
  - Worst-case
  - Best-case
  - Acceptable risk
  - Dependency-based
  - …

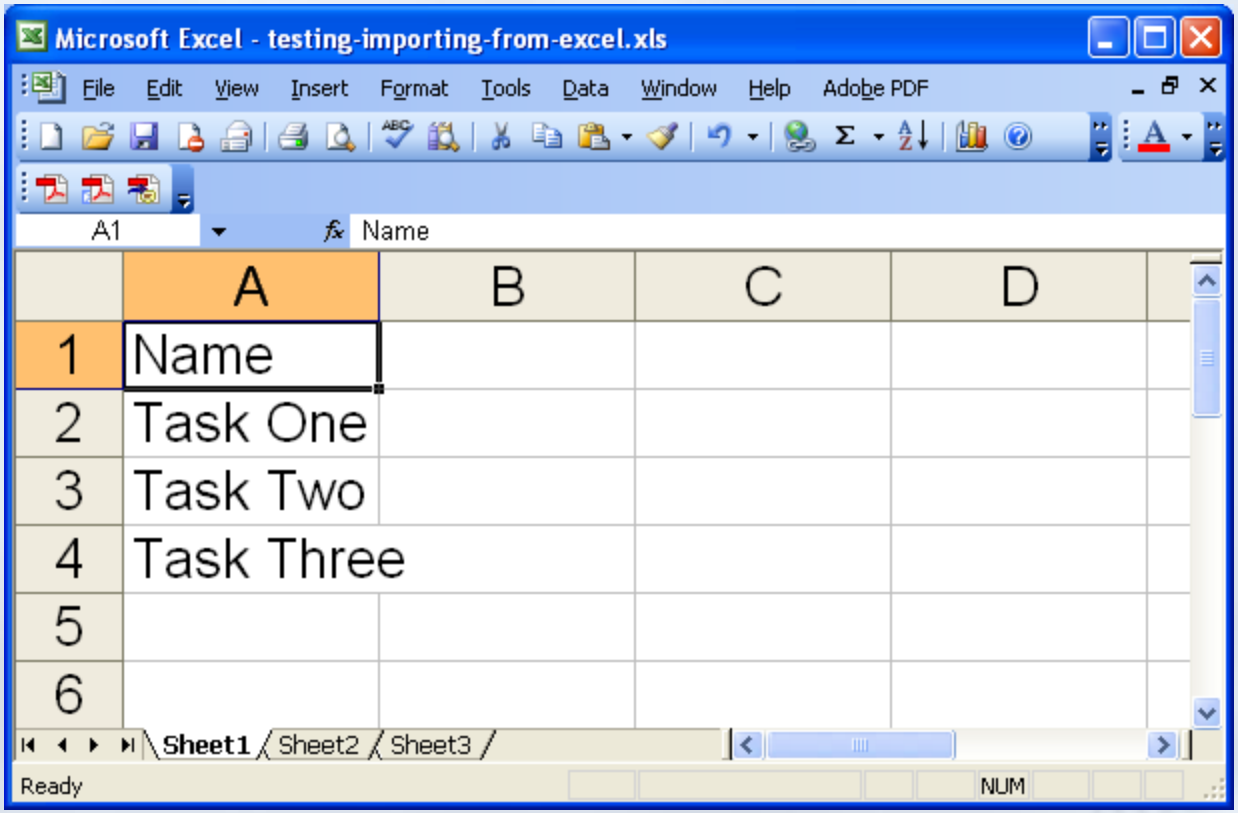
Week One: Chapter Two

- What if I already have a lot of tasks entered into another application, like Excel?
  - From Microsoft Office Project Help:
    - Click **Open**.
    - In the **Files of type** box, click the file type you want to import data from.
    - To import data from a SQL Server or Oracle Server format, click **ODBC** to connect to your data source, and then continue with step 5.
    - In the **Look in** box, locate the folder that contains the file you want to import, and then select the file in the file list.
    - If needed, you can search for the file.
    - Click **Open**.
    - Follow the instructions in the Import Wizard to import the data you want into the proper Microsoft Office Project 2003 fields.

Week One: Chapter Two

- Now, the Wizard is most straightforward if you have a heading in your Excel file for your tasks, named "Name".
- Also, chapter 12 of our book does a good job of explaining how to do this.
- Here's an example. I made a simple Excel spreadsheet, like so (and I've zoomed in on it):

Week One: Chapter Two

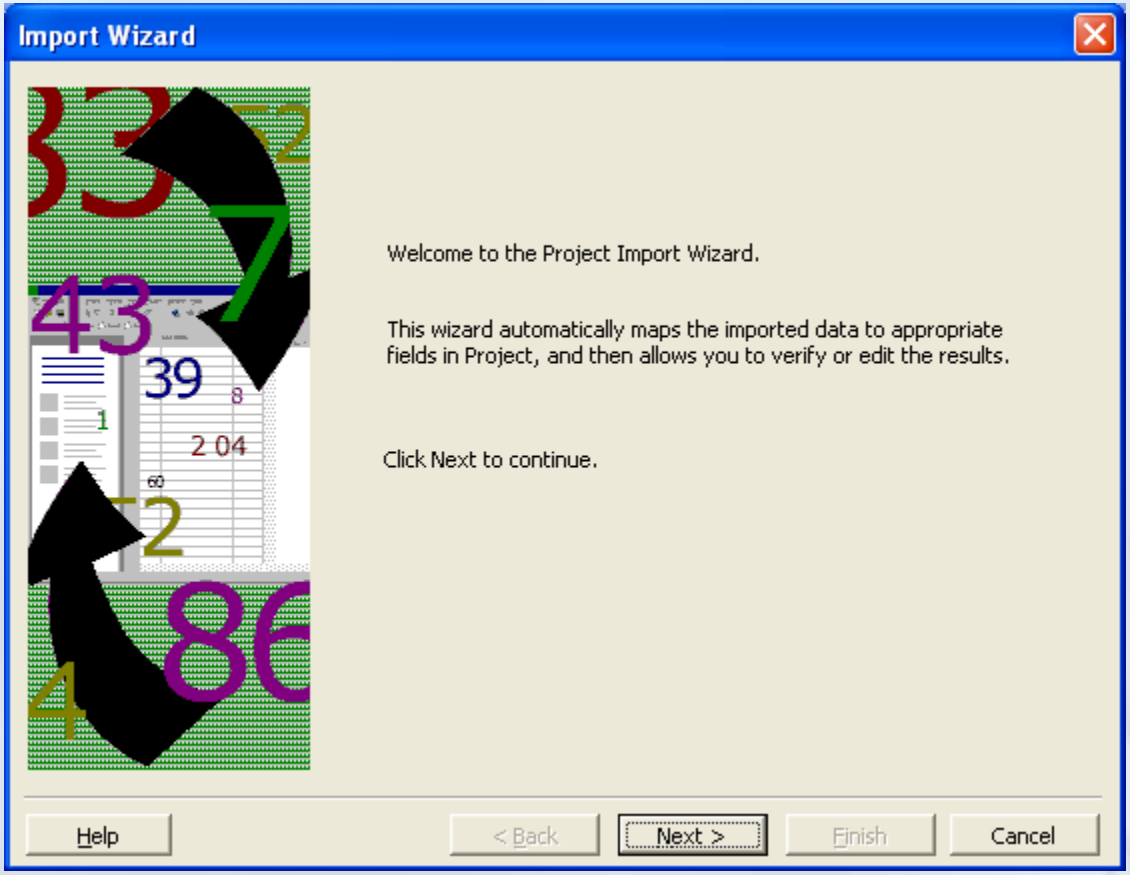


Week One: Chapter Two

- Now, in Project, with a project file open already, click on the File menu, and then click Open.
  - You'd think we'd be looking for an "import" choice, but no.
- In the Files of Type drop-down menu, choose Microsoft Excel Workbooks (.xls)
- Browse to the Microsoft Excel file, select it, and click Open.

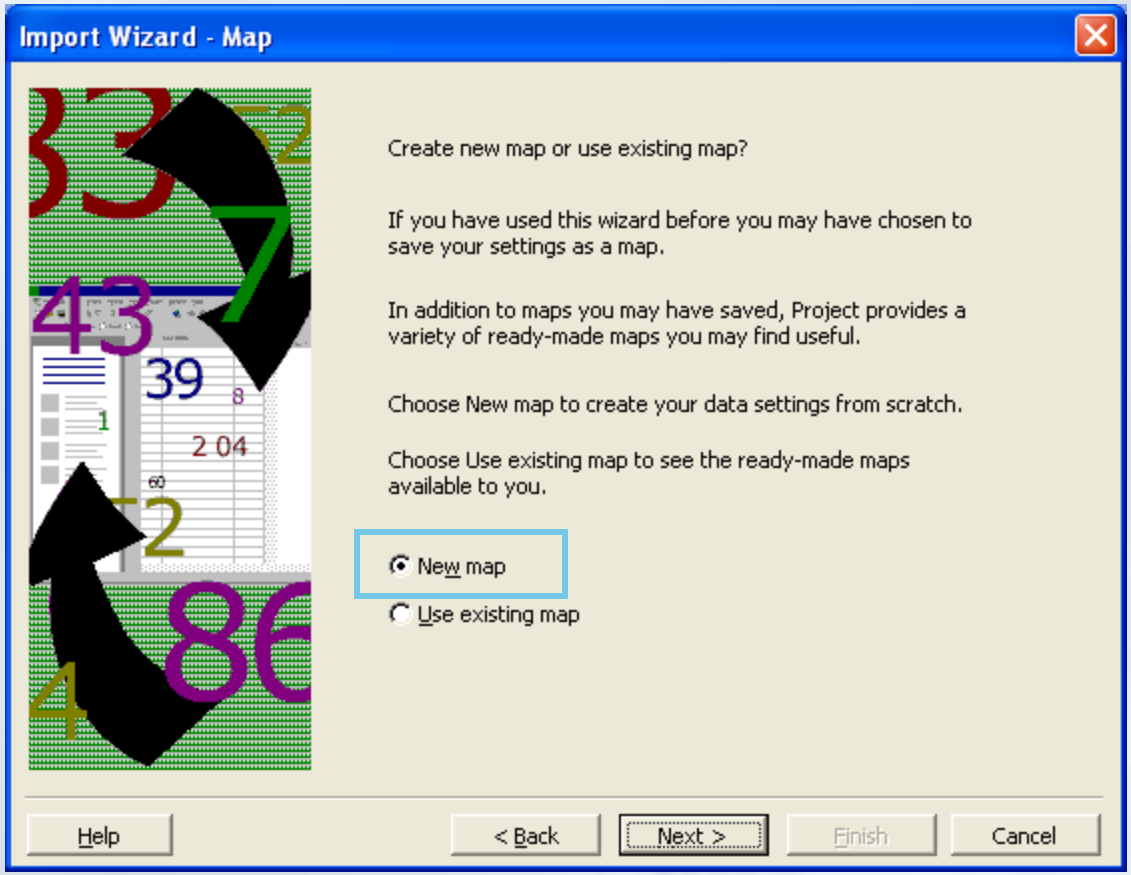
Week One: Chapter Two

- The Project Import Wizard will appear:



Week One: Chapter Two

- Click Next.
- It'll ask you if you want to create a new map or use an existing map. Choose New Map, and click Next.

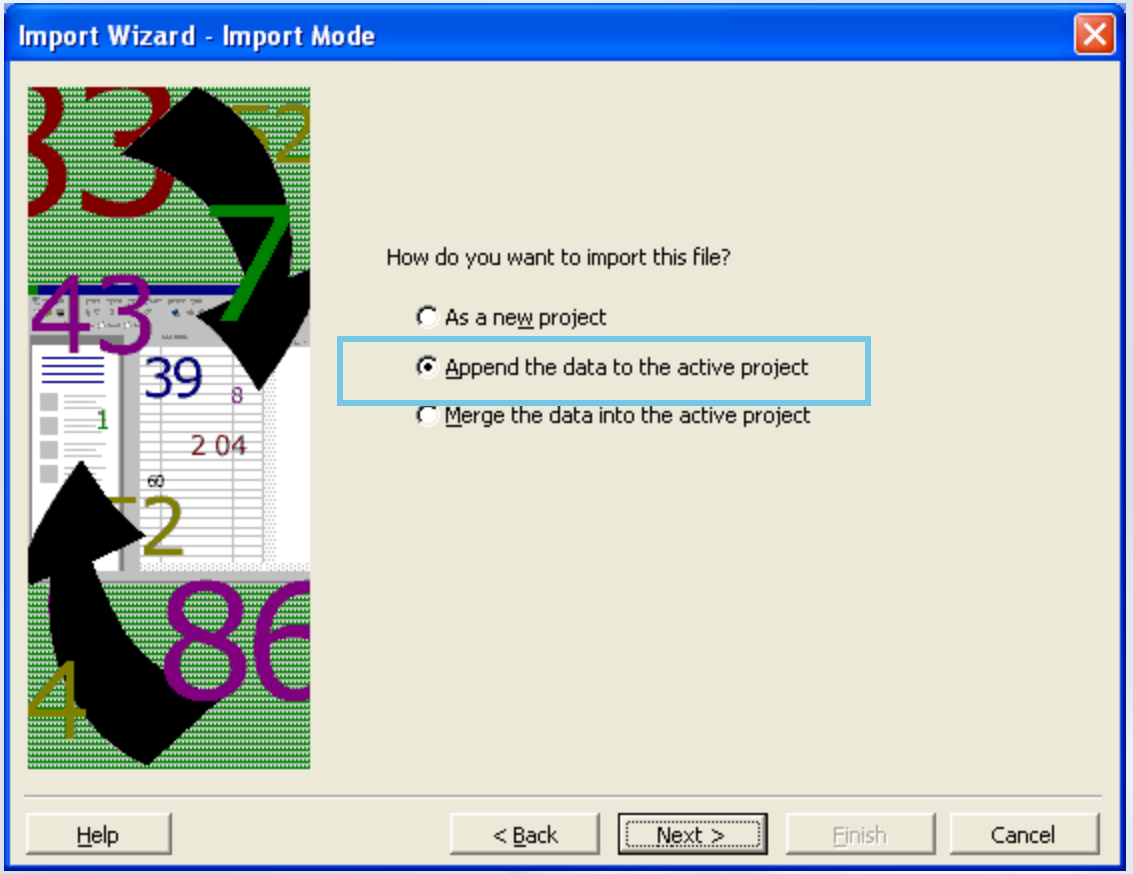


Week One: Chapter Two

- It'll ask you "How do you want to import this file?" The choices are:
  - As a new project
  - Append data to the active project
  - Merge the data into the active project
- Try appending.

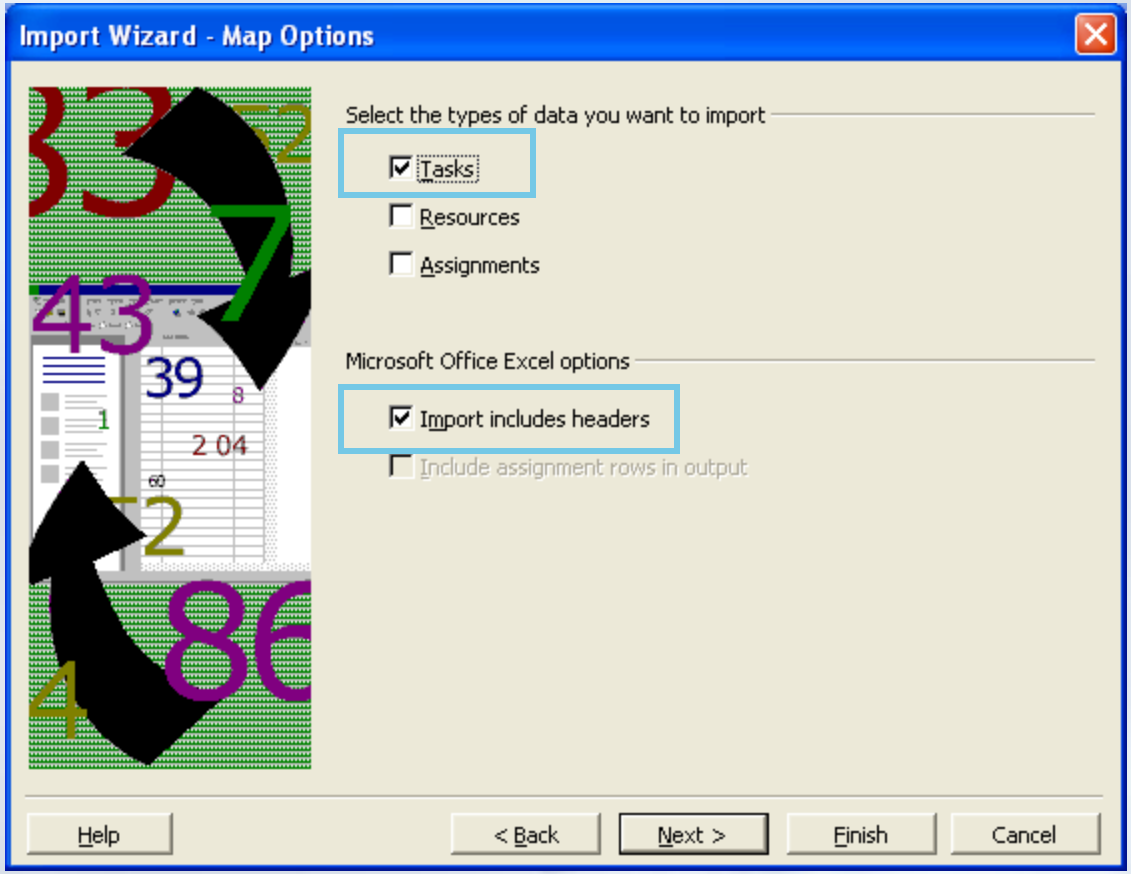
Week One: Chapter Two

- And click Next.



Week One: Chapter Two

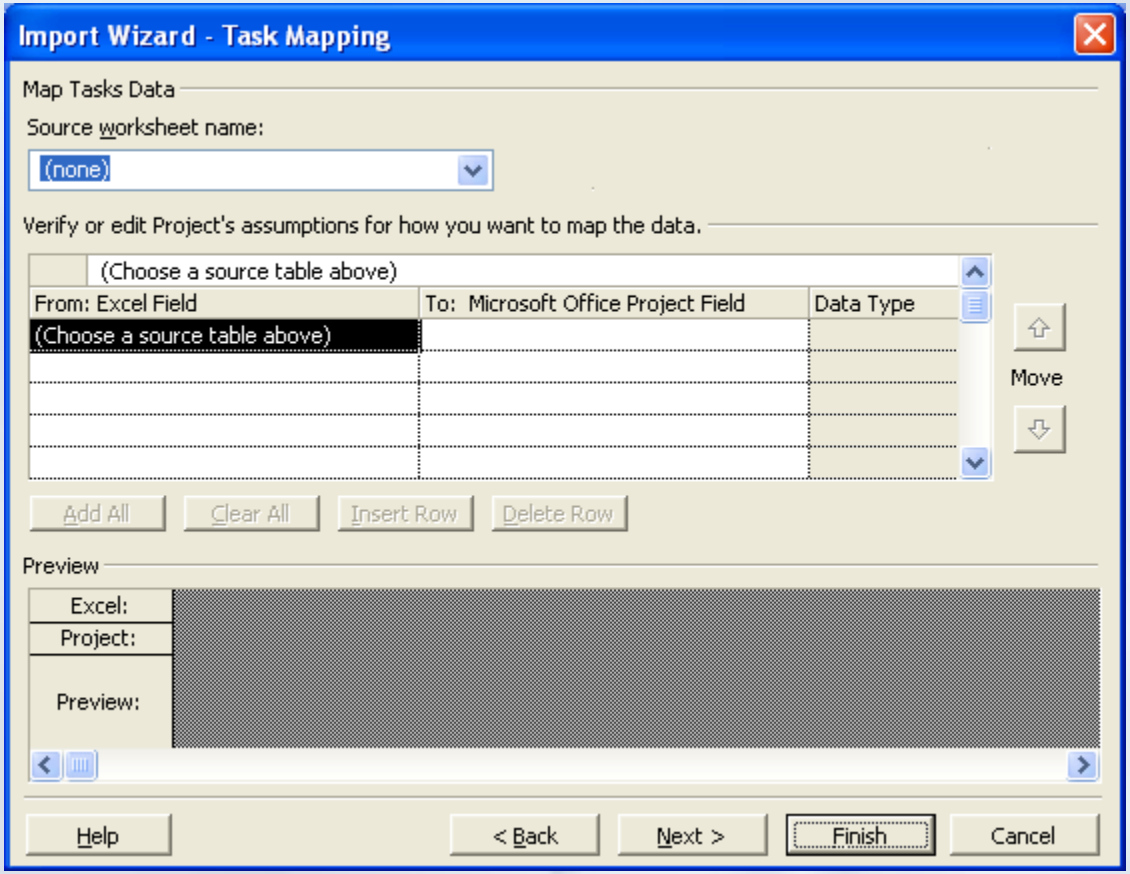
- It'll ask you to select the types of data you want to import. We're trying tasks, so choose Tasks. Also, under "Microsoft Office Excel Options," check off Import includes headers. And click Next.



Week One: Chapter Two

- First you'll see this:

In here, Source worksheet name, choose Sheet 1.



Week One: Chapter Two

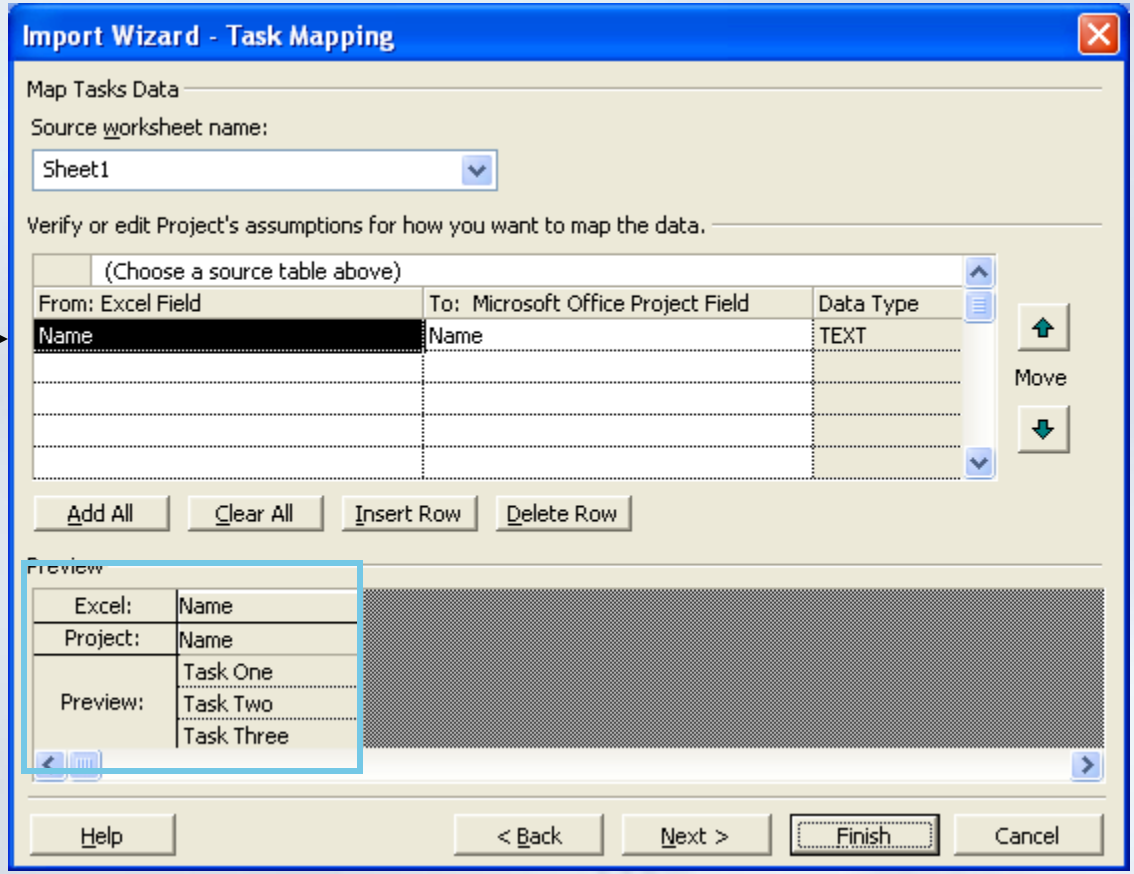
- Then it'll map the fields from Excel for you automatically, matching the header named *Name* in your Excel file with the field named *Name* in Project, which is the *Task Name* field in the Gantt chart.

Week One: Chapter Two

So, it filled this in:

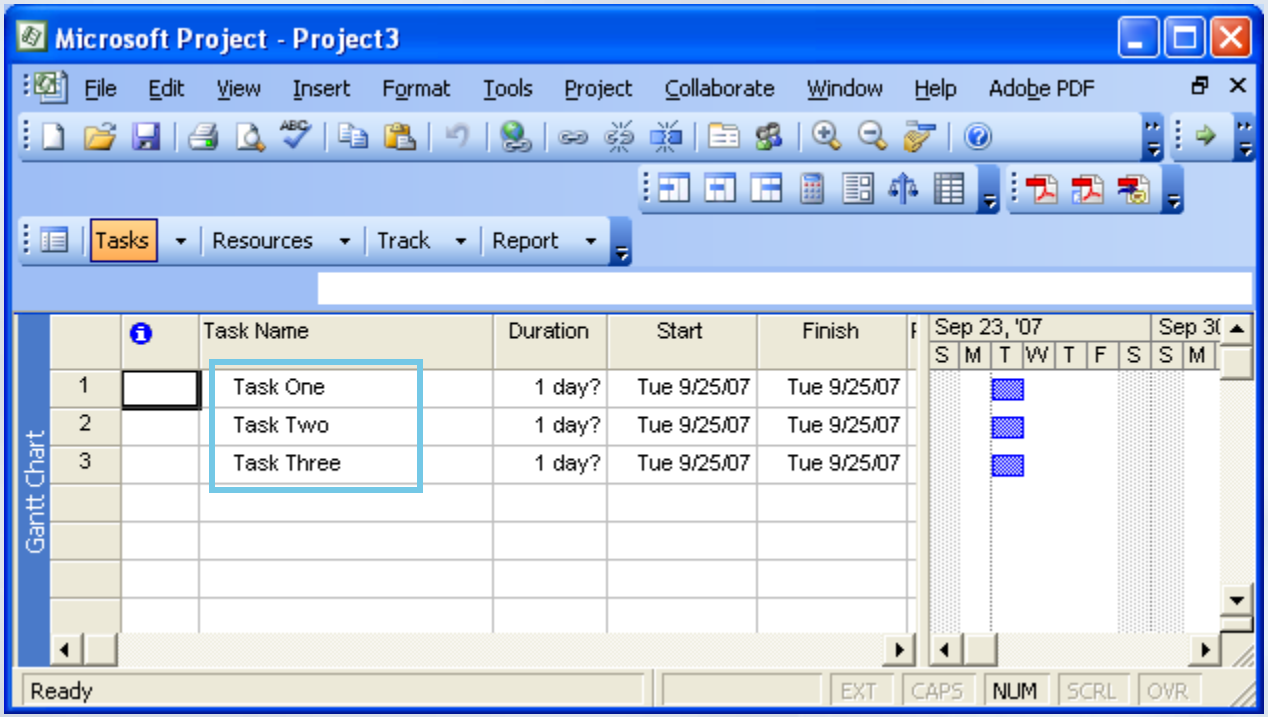
And it found the values from Excel

Click Next.



Week One: Chapter Two

- You can save your new map if you want to. Or, click Finish.
- It should import them:



Week One: Chapter Two

- A task's duration can range from minutes to months in Project.
- You'll probably want to use hours, days, or weeks, not minutes or months.
- Let's say that you've set up your project calendar with working time defined as 8:00am through 5:00pm, with a one-hour lunch break, Monday through Friday.
- If you estimate that a task will take 16 hours of working time, you could enter in "2d"

Week One: Chapter Two

- So, if the task starts at 8:00am on Friday, when will it complete?
- The overall duration of a project is the difference between the earliest start date and the latest finish date of its tasks.
- A task's duration and elapsed time are not necessarily the same.
  - Working time and non-working time.
  - Task relationships.

Week One: Chapter Two

- In Project, you can abbreviate durations.
- 30m, 5h, 2d, 1w, 2mo, for example.

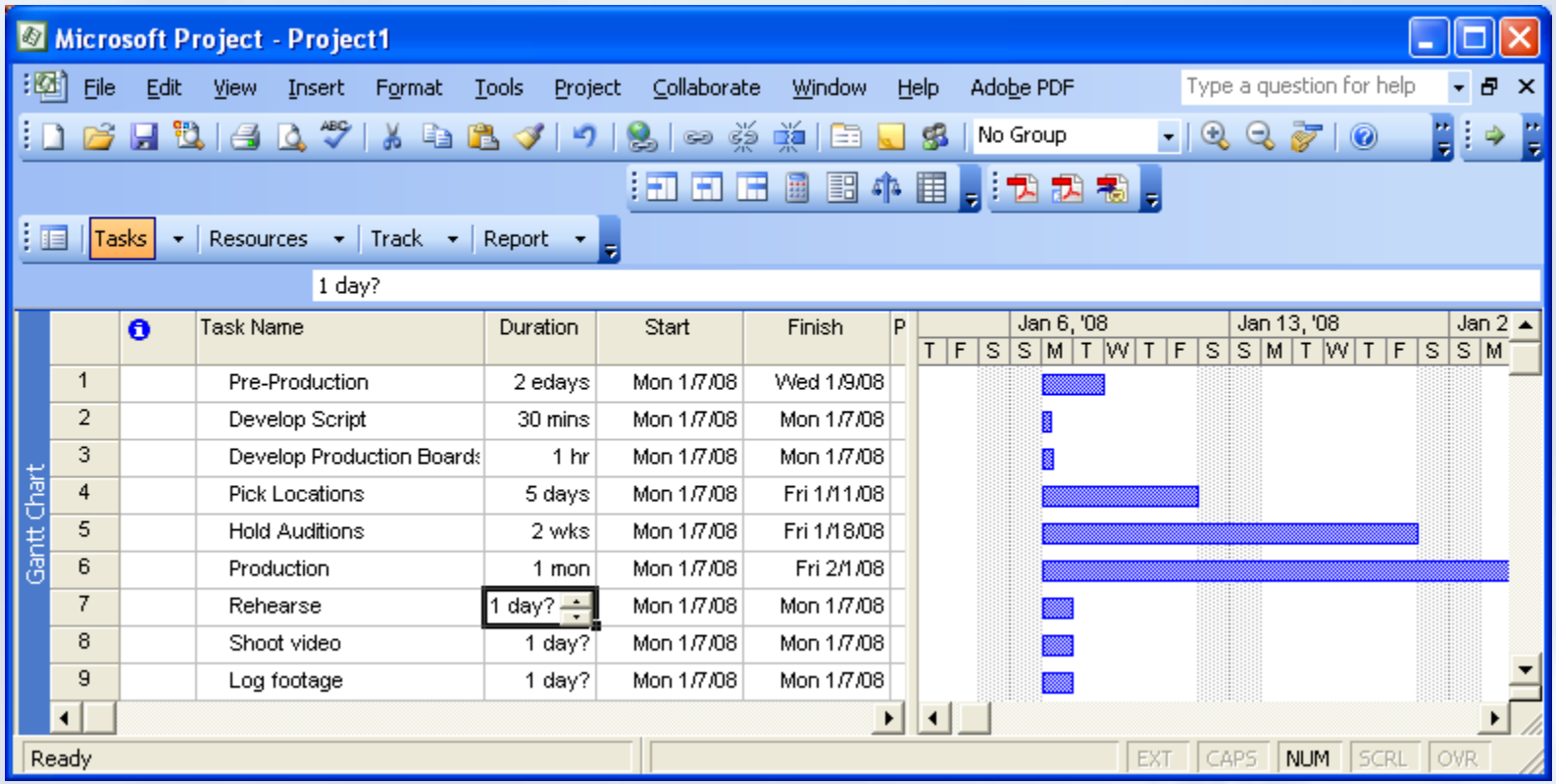
If you enter:	It appears like:	And means:
m	min	minute
h	hr	hour
d	day	day
w	wk	week
mo	mon	month

Week One: Chapter Two

- Elapsed duration
  - If you want to schedule something that happens over nonworking time. Like "wait for concrete to cure" or "wait for paint to dry."
    - No one's on the clock during it.
    - The next task after it is dependent upon its completion, though.
    - Use the abbreviation "ed", so "2ed" is 2 elapsed days.

Week One: Chapter Two

- So, try playing with these durations.



Week One: Chapter Two

- By default, in Project:
  - One minute = 60 seconds
  - One hour = 60 minutes
- If you wanted to define non-standard durations for days, weeks, months:
  - Go to the Tools menu > Options
  - Click the Calendar tab

Week One: Chapter Two

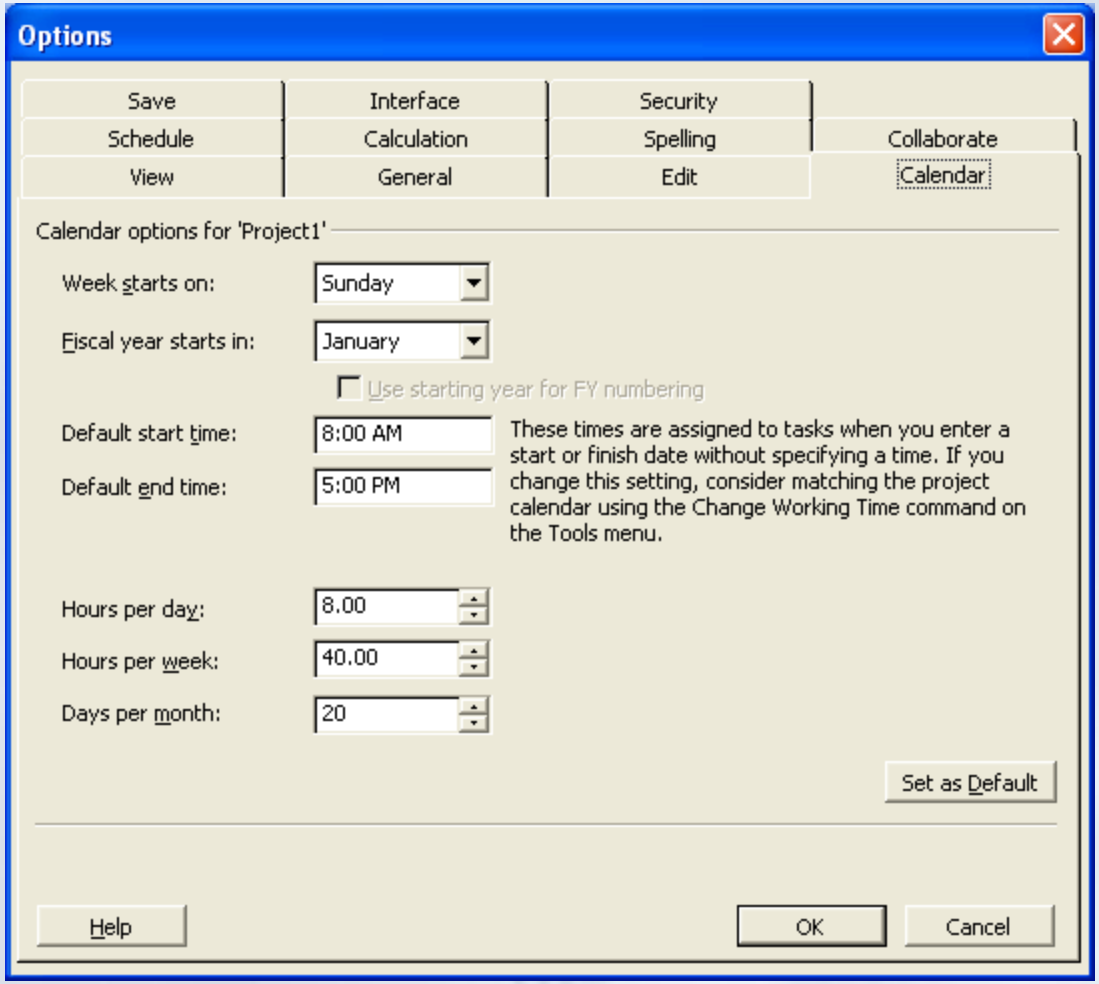
Hours per day is 8. Entering 2d, for 2 days, is the same as entering in 16 hours.

40 hours per week.

So, 3 wks is the same as 120 hours.

20 days per month.

So, 1 mo is the same as 160 hours. 8 hours per day x 20 days.



Week One: Chapter Two

- Exercise, pages 42-43
  - Enter durations for the tasks you've entered.
  - For the task "Develop Script," click the Duration cell.
  - Type 5d, and press enter.
  - For the rest of them:

Week One: Chapter Two:

Task ID	Task Name	Duration
3	Develop Production Boards	3d
4	Pick Locations	2d
5	Hold Auditions	2d
6	Production	Skip this one
7	Rehearse	2d
8	Shoot video	2d
9	Log footage	1d

Week One: Chapter Two

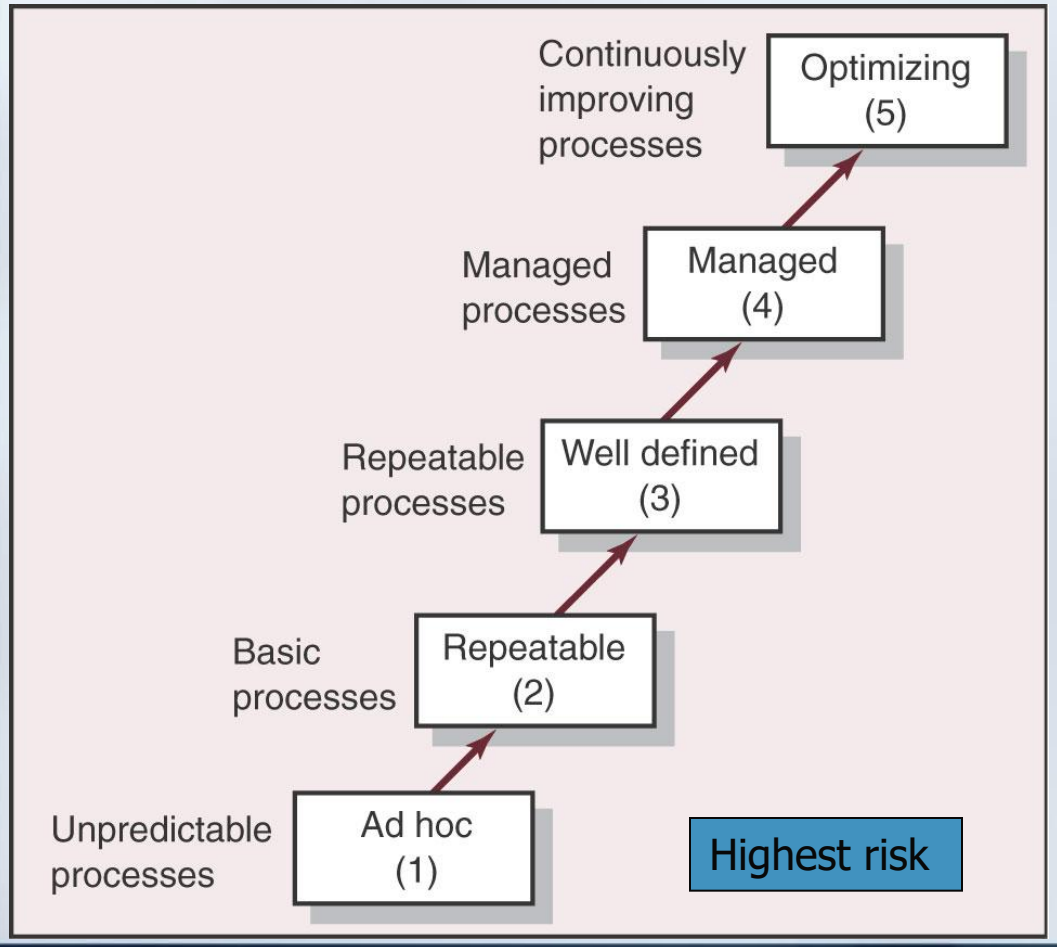
- Check out how the bars in the Gantt chart change.
- On project management:
  - Coming up with accurate task durations
    - The overall project duration generally tends to correlate – long projects have long tasks. Short projects have short tasks.
    - Consider the level of detail you need and want to track. Too much detail causes unnecessary work.
    - Measure down to the level of detail that you need to, to control the project.

Week One: Chapter Two

- In the book, the durations are supplied for you. Things to use to estimate task durations:
  - Historical information from past, similar projects
  - Estimates from the people working on the project
  - Expert judgment of people who have managed similar projects
  - Professional or industry standards

Week One: Chapter Two

Capability Maturity Model (CMM)



This is a tipping point which started off model inclusion as part of computerized decision support, & BI tools (esp. in analytics).

Very typical is the use of centralized Big Data platforms to incorporate the sheer volume of data in these models.

Source:
Project Management: The Managerial Process, Gray and Larson
http://highered.mcgraw-hill.com/sites/0072493925/

Week One: Chapter Two

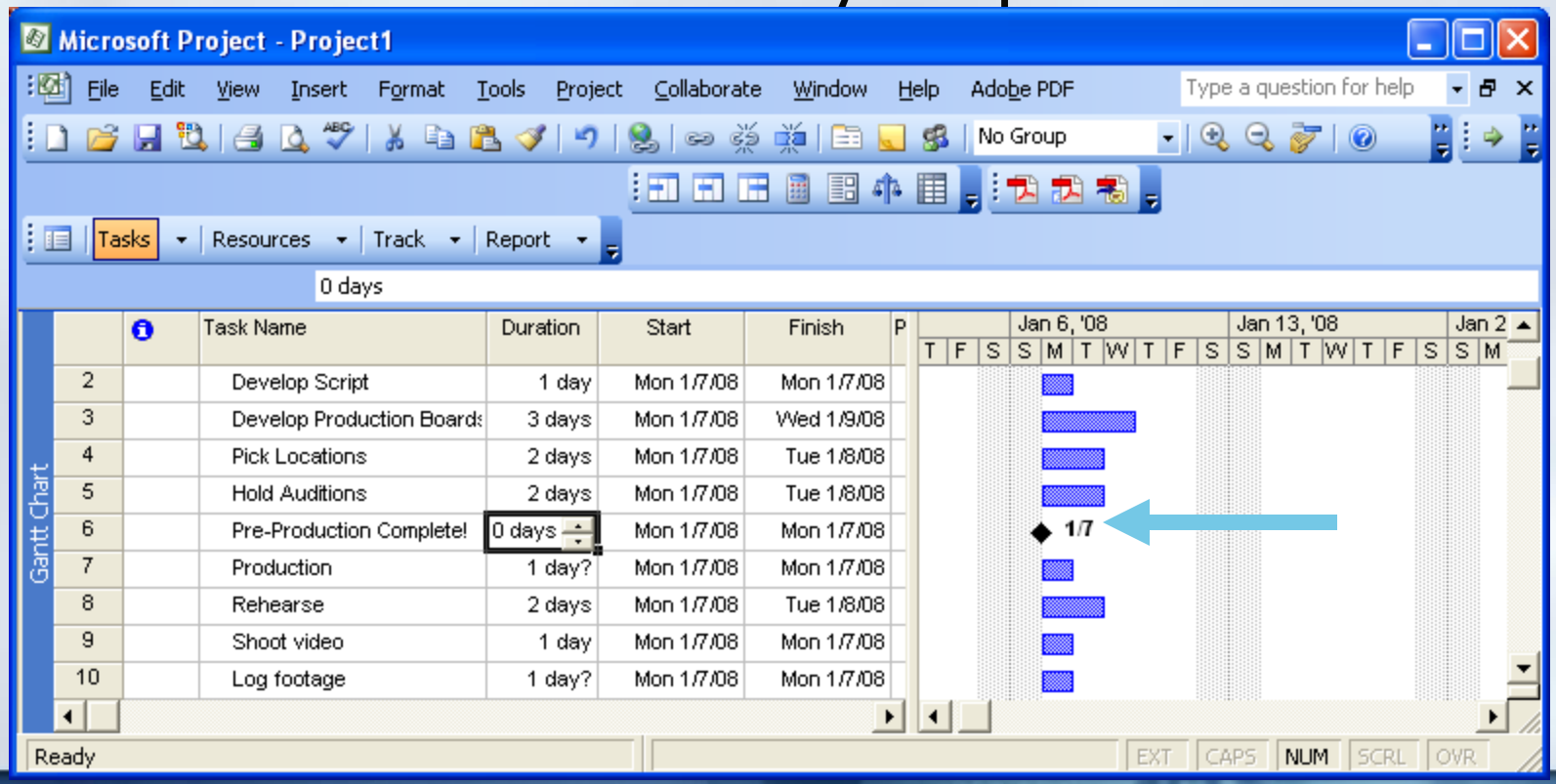
- The temptation to put a lot of padding into your schedule
- Risk
- Bidding on a contract – you may have to outdo your competitor
- Identify exactly where you need padding, why you need it
- You should be able to explain to your sponsor every last piece of the project plan, every last task

Week One: Chapter Two

- The 8/80 rule
  - The smallest task should be no smaller than 8 hours
  - The largest should be no larger than 80 hours
  - It's just a rule-of-thumb. It depends highly on your project.
- Exercise: Entering a milestone (page 44)
  - 1. Click the name of task 6, *Production*.
  - 2. On the Insert menu, click New Task.
  - 3. Type Pre-Production Complete! Then press the tab key to move to the Duration field.

Week One: Chapter Two

- 4. In the Duration field, type 0d and then press the Enter key.
  - It adds a milestone to your plan.

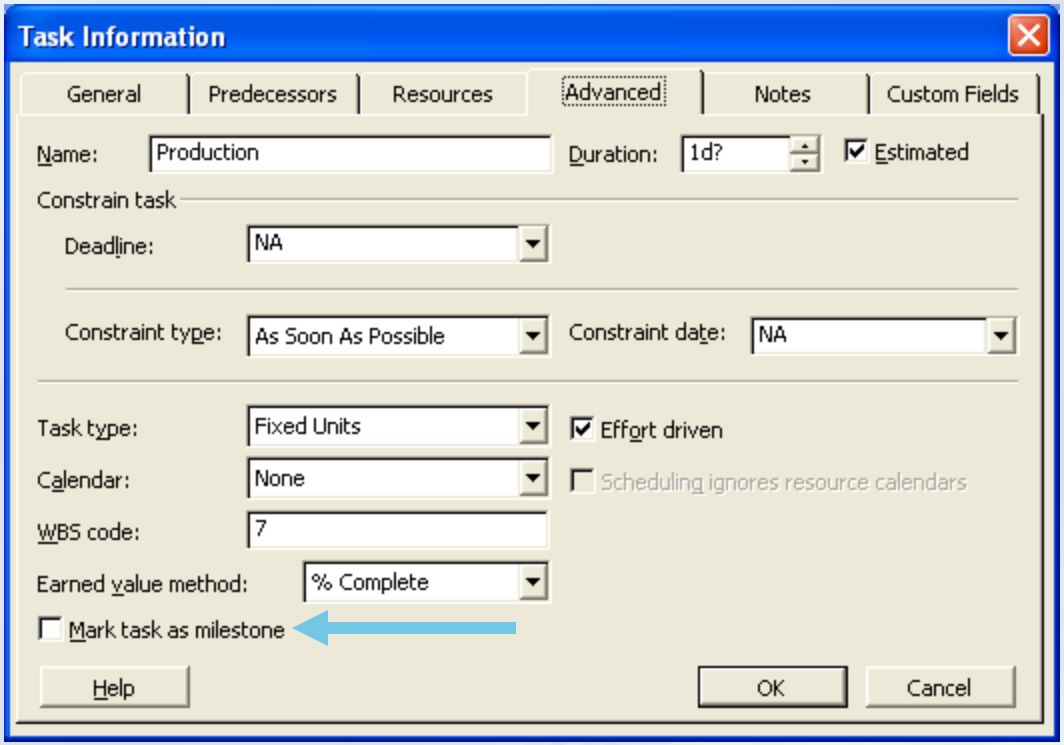


Week One: Chapter Two

- If you want to make a task that has a duration into a milestone:
  - Double-click the task name, to open the Task Information dialog box.
  - Click the Advanced tab.
  - Select Mark as Milestone.

Week One: Chapter Two

- The Mark task as milestone checkbox

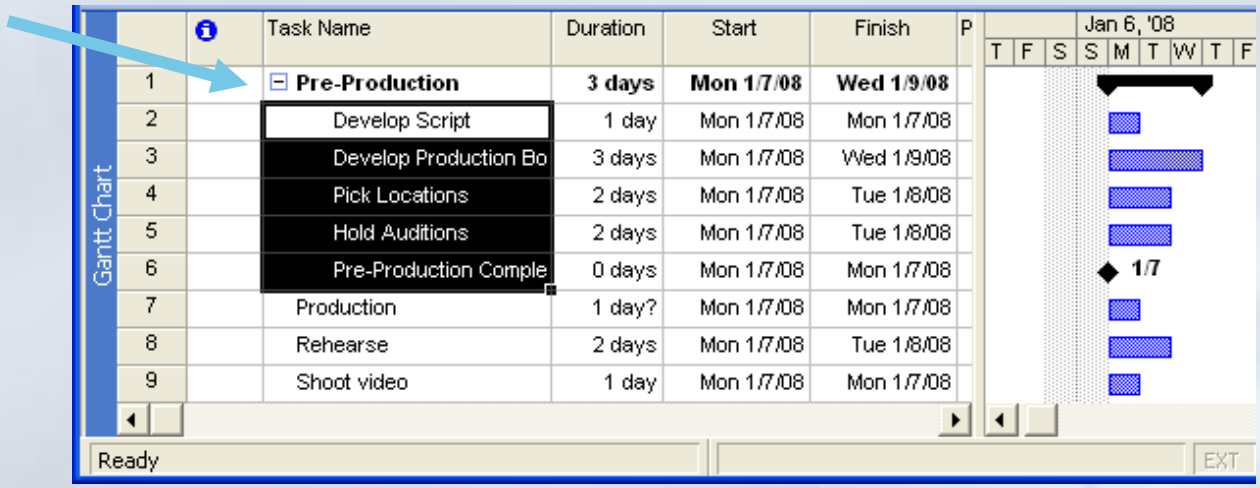


Week One: Chapter Two

- Organizing tasks into phases
  - Pre-production, production, post-production
  - A summary task behaves differently from other tasks.
    - You can't edit its duration or start date, or other calculated values. They're derived, or "rolled-up" from the subtasks contained within the summary task.
- Top-down and bottom-up planning

Week One: Chapter Two

- Exercise: create summary tasks
  - 1. Select the names of tasks 2 through 6.
  - 2. On the Project menu, go to Outline, and then click Indent.
  - Task 1 becomes a summary task.

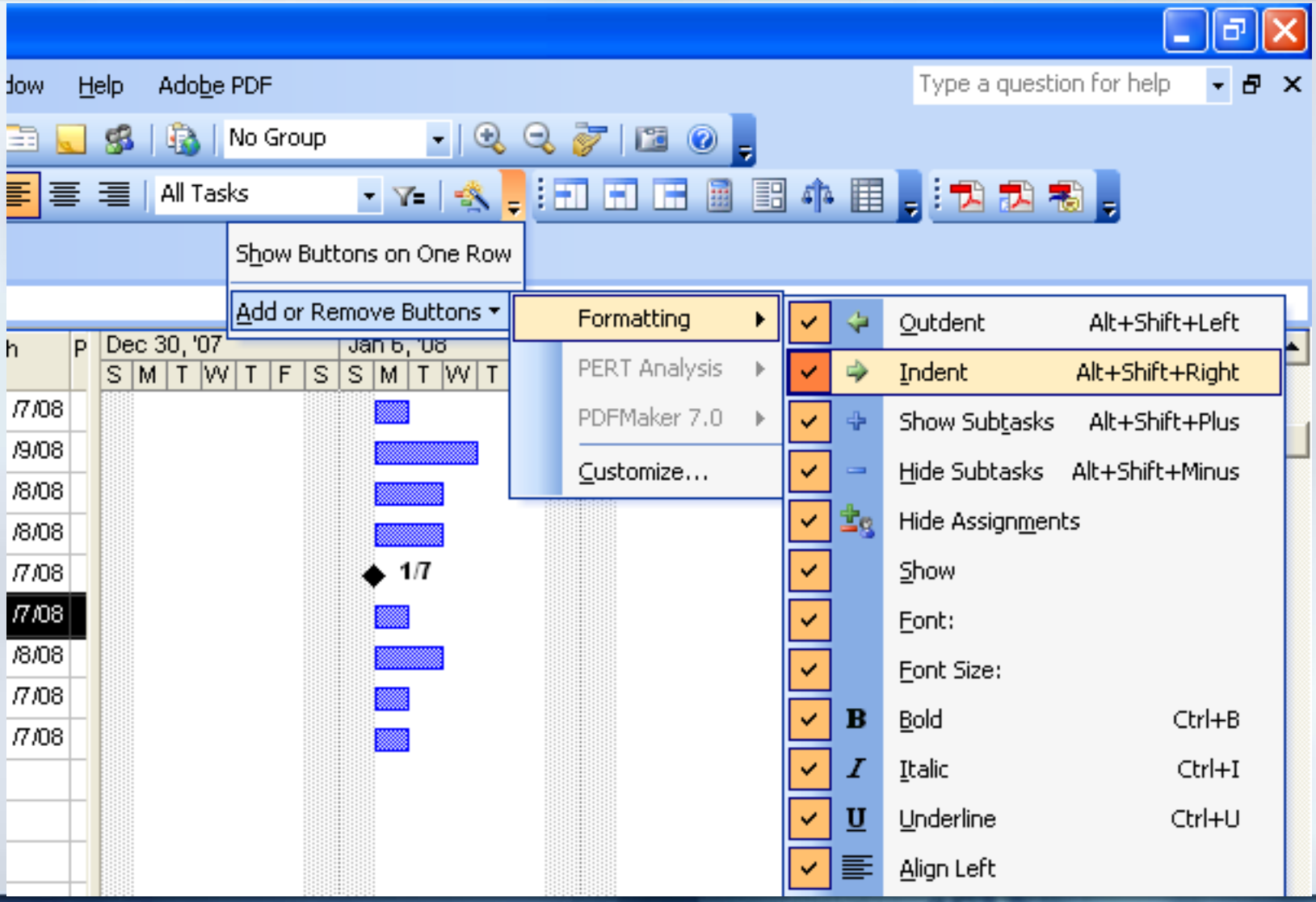


Week One: Chapter Two

- You can use the indent/outdent buttons instead.

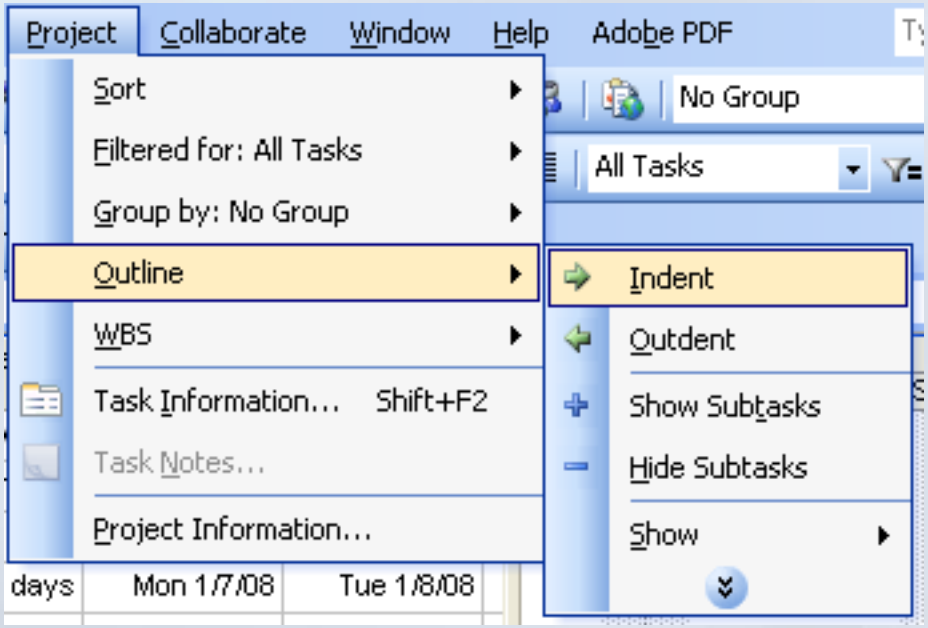
- If you don't see those buttons on your toolbar, then
  - At the right end of your toolbar, click on the down arrow.
  - Click on Add or Remove Buttons.
  - Click on Formatting.
  - Check off Indent and Outdent. (Illustrated on the next slide)

Week One: Chapter Two



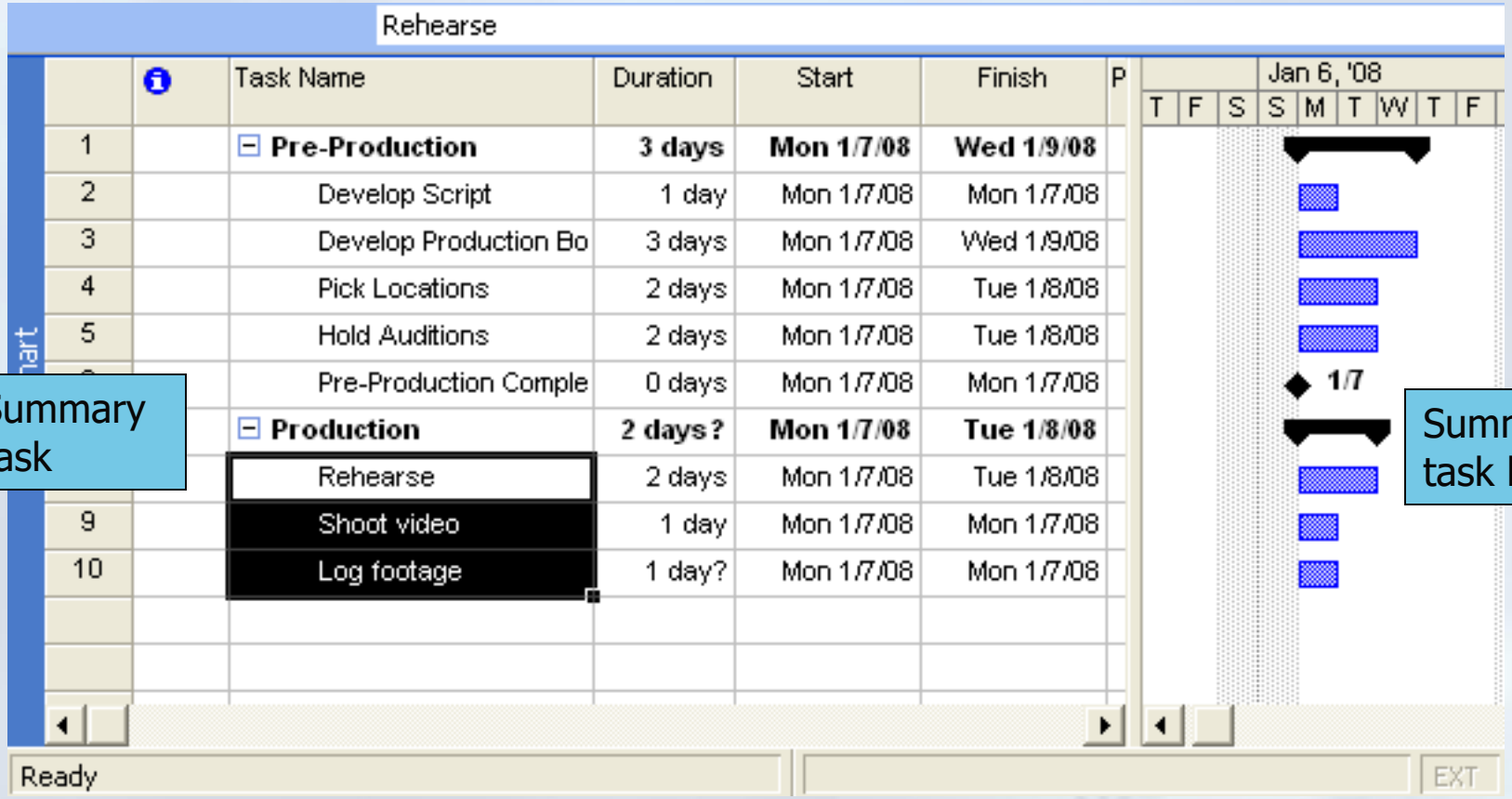
Week One: Chapter Two

- 3. Next, select the names of task 8 through 10.
- 4. On the Project menu, point to Outline, and then click Indent.



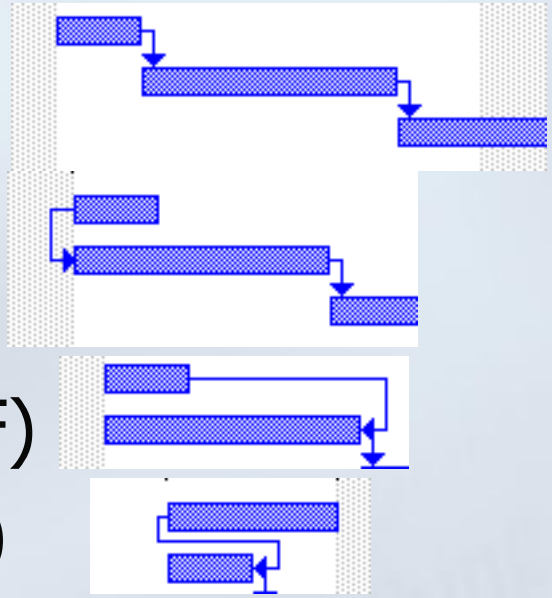
Week One: Chapter Two

- Task 7 becomes a summary task.



Week One: Chapter Two

- Linking Tasks
  - Finish to start (FS)
  - Start to Start (SS)
  - Finish to Finish (FF)
  - Start to Finish (SF)



- There's an exercise on pages 49-51

Week One: Chapter Two

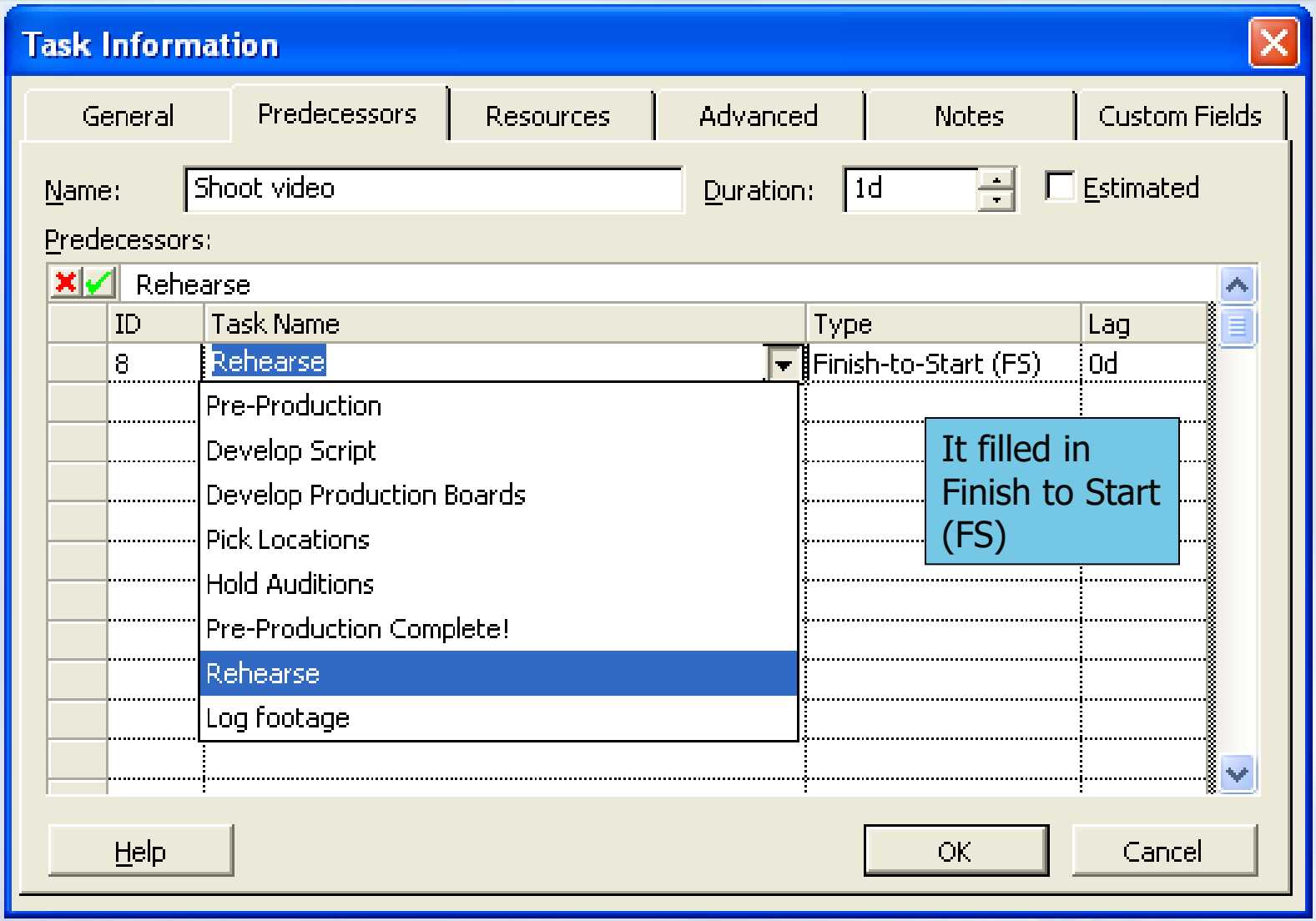
- Ways to link tasks
  - The chain icon, unchain icon

  - Highlight two tasks, and then on the Edit menu, click Link Tasks.

Week One: Chapter Two

- Highlight a task.
  - On the Project menu, click Task Information.
  - Click the Predecessors tab.
  - Click the empty cell below the Task Name heading, and click the down arrow.
  - Select another task (Rehearse is the task in the example).

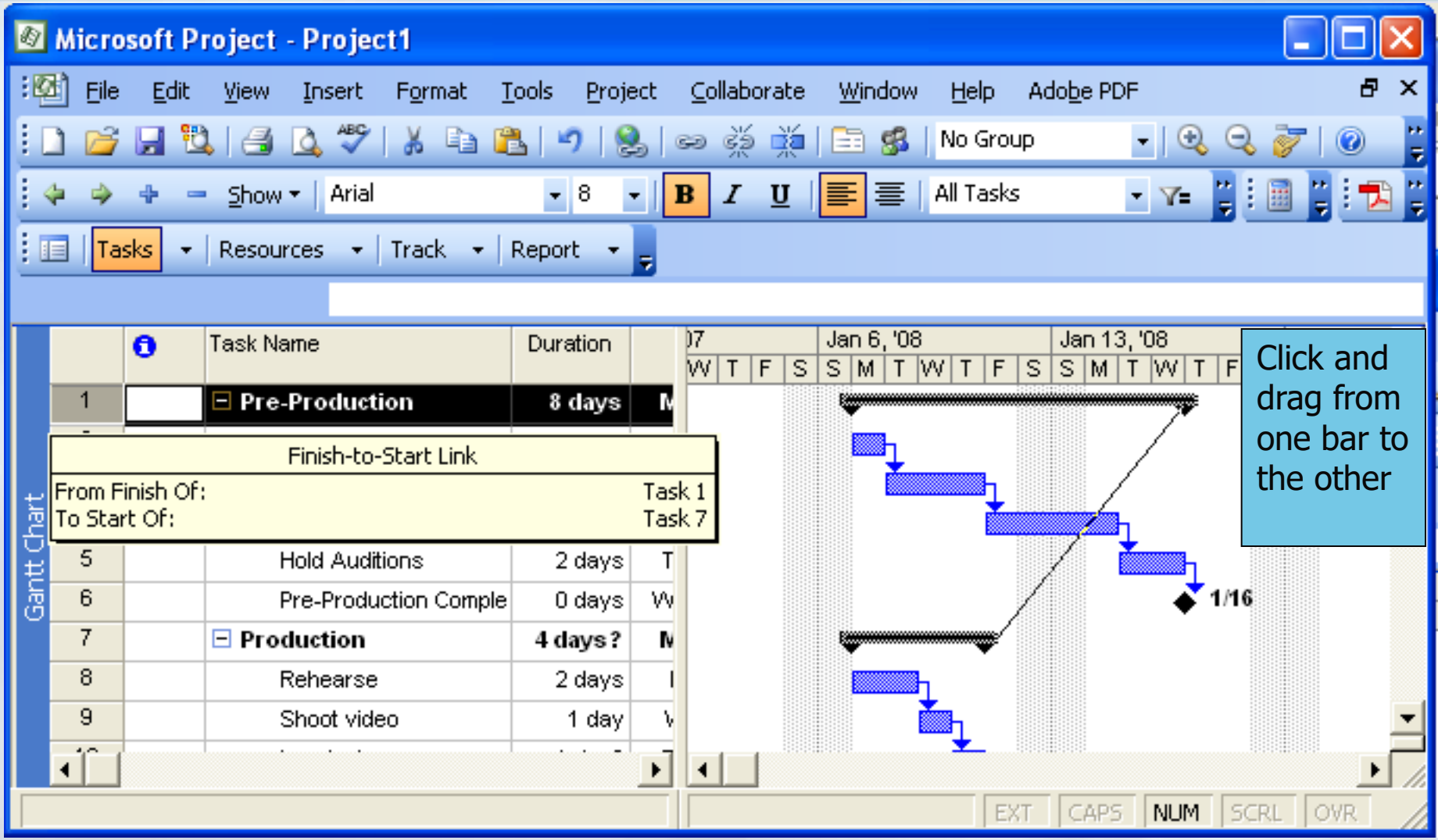
Week One: Chapter Two



Week One: Chapter Two

- Linking tasks that aren't next to each other
  - Select a task
  - Hold down the control key
  - Select another task
  - Link tasks using any of the methods above
- You can link summary tasks to each other.
- You can also link tasks right in the Gantt chart.

Week One: Chapter Two



Week One: Chapter Two

Another way to link non-adjacent tasks

- Select the task you want to be the successor task.
- Click the Task Information button on the Standard toolbar, and then click the Predecessors tab.
- In the Task Name column, select the predecessor task you want.

The task information button: 

Week One: Chapter Two

To enter lead or lag time between linked tasks

- Select the successor task.
- Click the Task Information button on the Standard toolbar, and then click the Predecessors tab.
- In the Lag field, enter the lag time (positive value) or lead time (negative value) you want.

Week One: Chapter Two

To change the link type between two tasks

- Select the successor task.
- Click the Task Information button on the Standard toolbar, and then click the Predecessors tab.
- Select the successor task, In the Type field, select the link type you want (Finish to Start, Start to Finish, et cetera)

Week One: Chapter Two

- So, we saw four ways to link tasks
  - The Link Tasks button
  - The Edit Menu > Link Tasks
  - The Project menu > Task Information, Predecessors tab
  - Clicking and dragging directly from one Gantt chart bar to another

Week One: Chapter Two

- Documenting tasks
  - Task notes
  - Exercise on page 53
  - There's a Task Notes button on the Standard toolbar:

  - Project menu > Task Notes
  - Right-click the task name, and choose Task Notes
  - Screentips

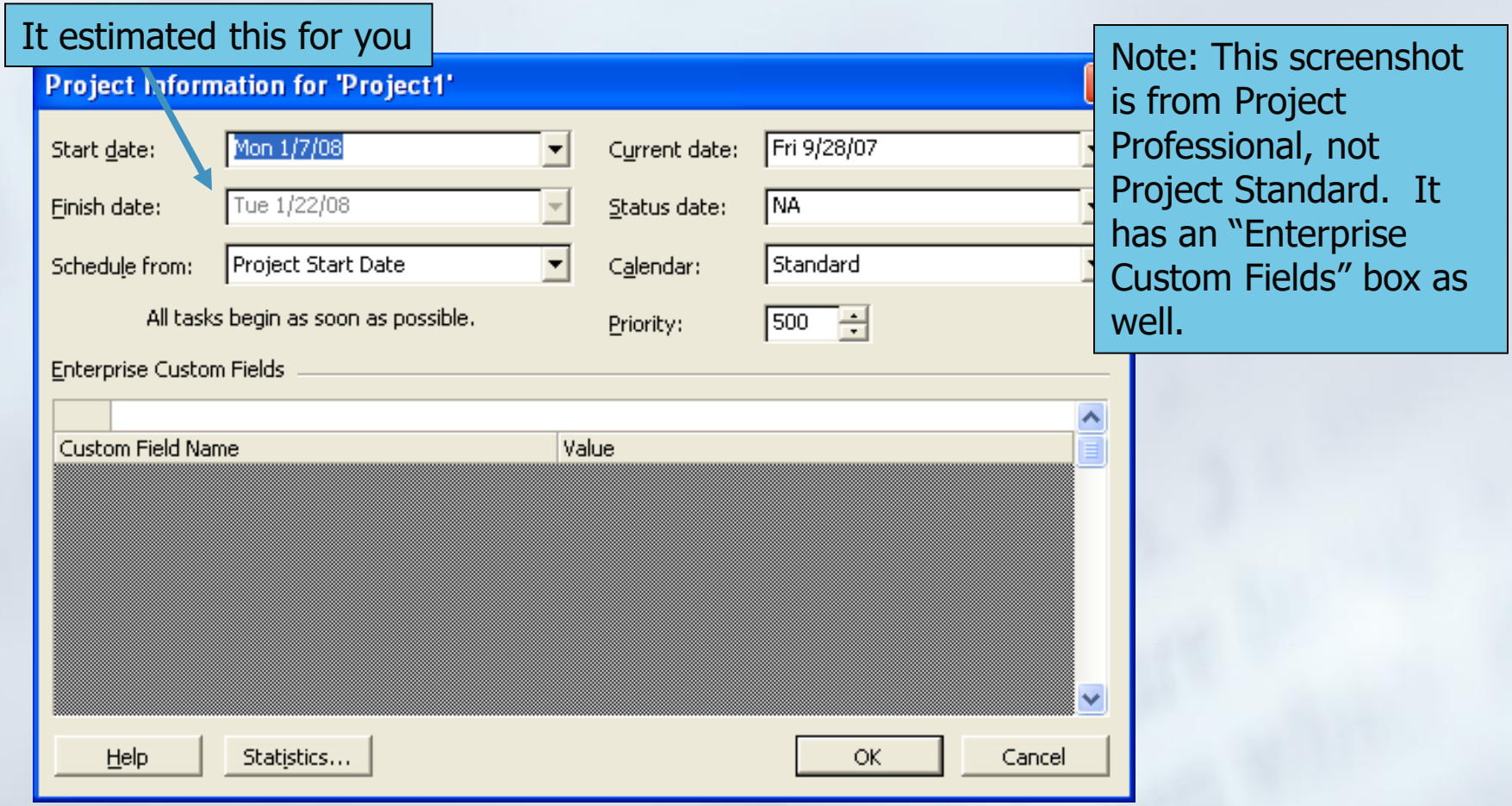
Week One: Chapter Two

- Create a hyperlink
  - Select a task
  - On the Insert menu, choose Hyperlink.
  - You can also click the Insert Hyperlink button, or right-click on a task and choose Hyperlink.
  - Text to Display and the Address

  - Checking the Plan's Duration
    - Project has estimated the duration of the project for you.

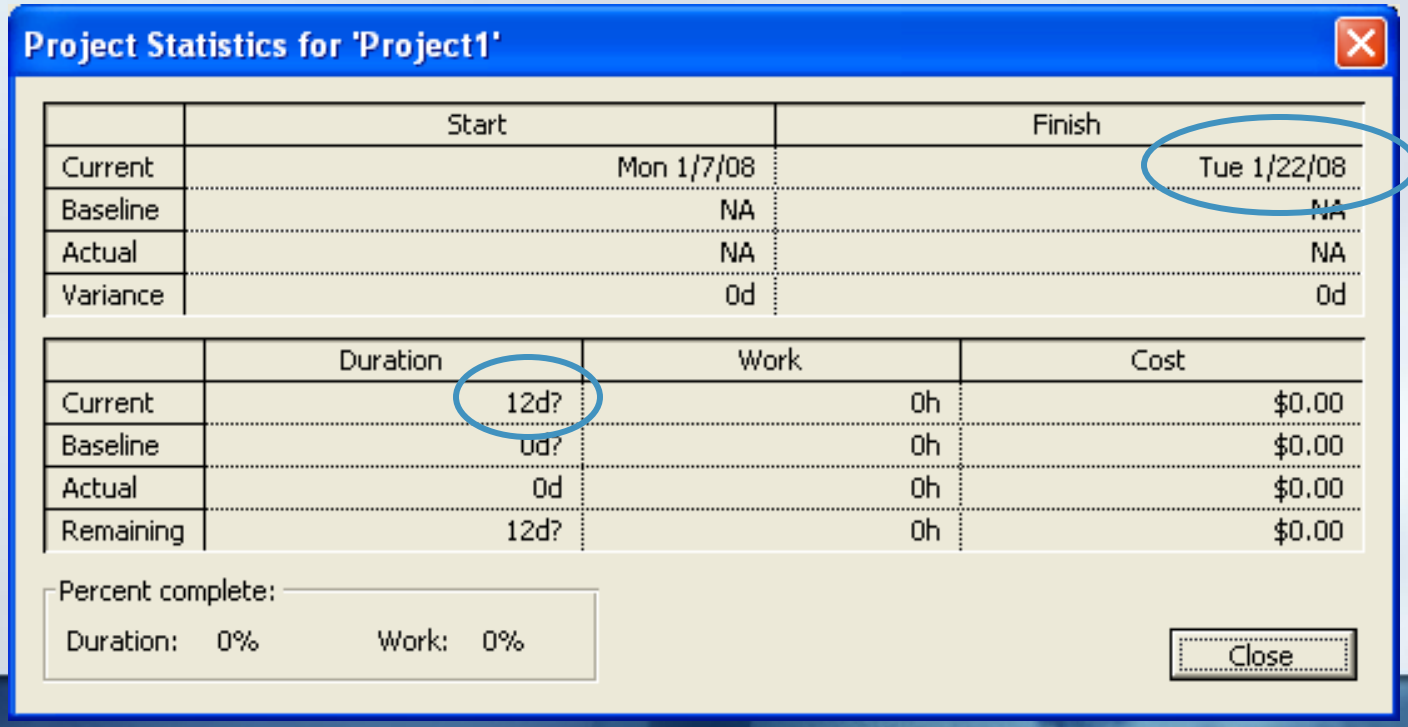
Week One: Chapter Two

- Project menu > Project Information



Week One: Chapter Two

- On that Project Information dialog box, click the Statistics button.
- Let's look at the current finish date and the current duration.



Week One: Chapter Two

- Change the timescale, so you can see the complete project
  - View menu > Zoom.
  - Select Entire Project, and click OK.
  - Look at the Gantt chart. It will have changed how far zoomed in it is.
  - You can also use the zoom in and zoom out buttons to do the same thing.

Chapter 2 Glossary

- **baseline** **The original project plan, saved for later comparison. The baseline includes the planned start and finish dates of tasks and assignments and their planned costs. Each Microsoft Project file can have at most one baseline.**

Chapter 2 Glossary

- **bottom-up planning** **Developing a project plan by starting with the lowest-level tasks before organizing them into broad phases.**

- **deliverable** **The final product, service, or event a project is intended to create.**

Chapter 2 Glossary

- **dependency** **A link between a predecessor task and a successor task. A dependency controls the start or finish of one task relative to the start or finish of the other task. The most common dependency is finish-to-start, in which the finish date of the predecessor task determines the start date of the successor task.**

Chapter 2 Glossary

- **duration** The length of working time you expect it will take to complete a task.

- **elapsed duration** The total length of working and nonworking time you expect it will take to complete a task.

Chapter 2 Glossary

- **Entry table** The grid in the left side of the default Gantt Chart view.

- **field** The lowest-level information about a task, resource, or assignment; also called a cell.

Chapter 2 Glossary

- **Gantt Chart view** One of several predefined views in Microsoft Project. The Gantt Chart view consists of a table (the Entry table by default) on the left side and a graphical bar chart on the right side.
- **link** A logical relationship between tasks that controls sequence and dependency. In the Gantt Chart and Network Diagram views, links appear as lines between tasks.

Chapter 2 Glossary

- **milestone** A significant event that might be reached within the project or imposed upon the project. In Microsoft Project, milestones are normally represented as tasks with zero duration.

- **predecessor** A task whose start or end date determines the start or finish of another task or tasks, called successor tasks.

Chapter 2 Glossary

- **product scope** The quality, features, and functions (often called specifications) of the deliverable of the project.

- **project scope** The work required to produce a deliverable with agreed-upon quality, features, and functions.

Chapter 2 Glossary

- **relationship** The type of dependency between two tasks, visually indicated by a link line. The types of relationships include finish-to-start, start-to-start, finish-to-finish, and start-to-finish. Also known as a link, a logical relationship, a task dependency, or a precedence relationship.

Chapter 2 Glossary

- **risk** Any event that decreases the likelihood of completing the project on time, within budget, and to specification.
- **shortcut menu** A menu you display by pointing to an item on the screen and then clicking the right mouse button. Shortcut menus contain only the commands that apply to the item to which you are pointing.

Chapter 2 Glossary

- **sequence** The chronological order in which tasks occur. A sequence is ordered from left to right in most views that include a time scale, for example, the Gantt Chart view.

- **successor** A task whose start or finish is driven by another task or tasks, called predecessor tasks.

Chapter 2 Glossary

- **summary task** A task that is made up of and summarizes the subtasks below it. In Microsoft Project, phases of project work are represented by summary tasks.

- **Task ID** A unique number that Microsoft Project assigns to each task in a project. In the Entry table, the Task ID appears in the far left column.

Chapter 2 Glossary

- **ToolTip** A short description of an item on the screen, such as a toolbar button, that appears when you hover the mouse cursor over the item.

- **Top-down planning** Developing a project plan by identifying the highest-level phases or summary tasks before breaking them into lower-level components or subtasks.