Reminder

Self essay is due 11:59pm, Friday, Aug 30 in Blackboard

Today's Agenda

- Design principles
- Team project
- Project management plan
- Quiz 1

Review: Six Design Principles

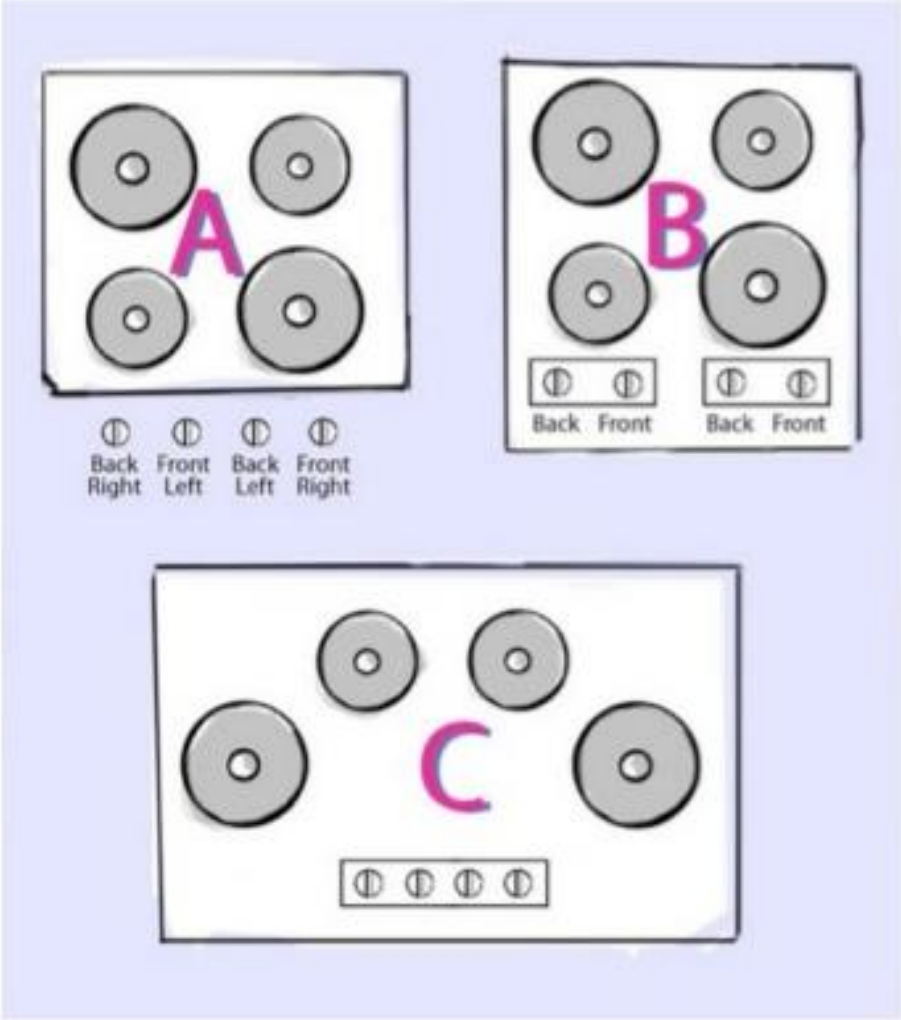
1. Visibility – Can I see it?
2. Feedback – What is it doing now?
3. Affordance – How do I use it?
4. Mapping – What is the relationship between things?
5. Constraint – Why can't I do that?
6. Consistency – I think I have seen this before?

4. Mapping

- Relationship to controls and their effect

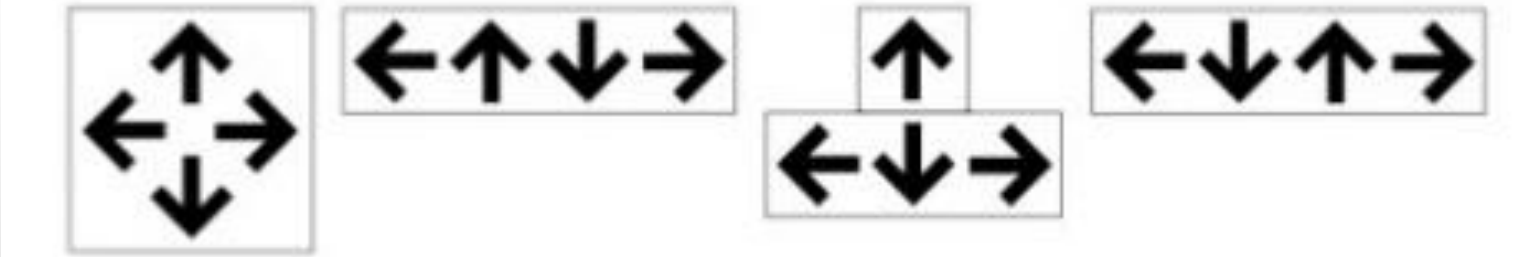
4. Mapping

Relationship to controls and their effect



4. Mapping

Relationship to controls and their effect

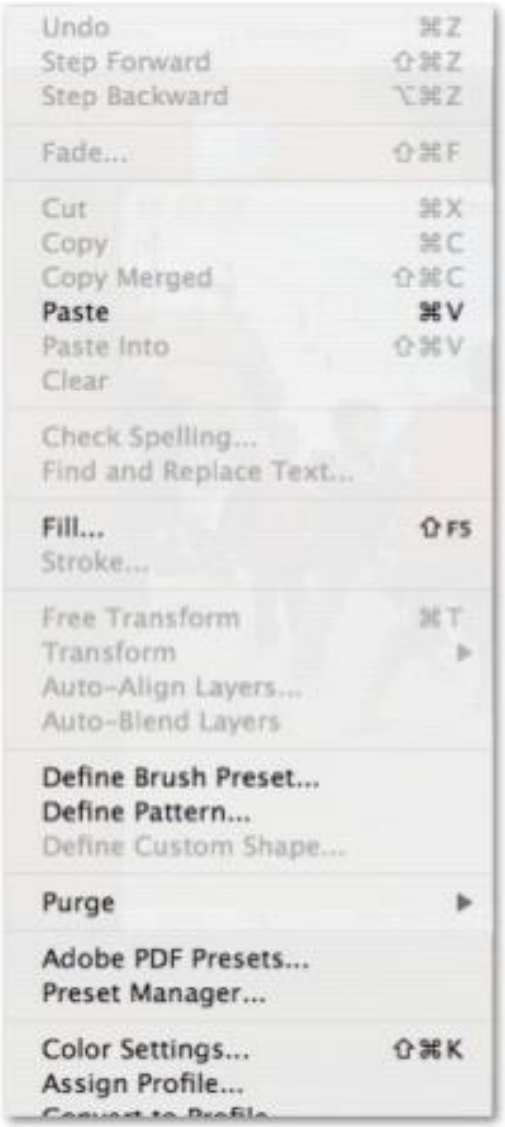


5. Constraints

Restricting the kind of interactions that can take place

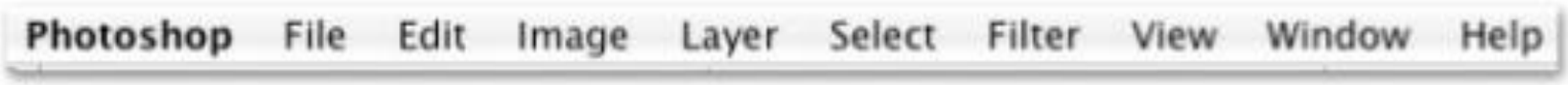
5. Constraints

- Restricting the kind of interactions that can take place
- Reduce the chance of error
- Can also work to focus user's attention to needed task



6. Consistency

- Designing interfaces that have similar operations and use similar elements for achieving similar tasks
- Easy to learn and use



6. Consistency

6. Consistency

Why Design is Hard…

- Tradeoff when applying multiple design principles
- Number of things to control has increased dramatically
- Displays are more virtual/artificial
- Marketplace pressure
  - Adding operations cheaper (computers)
  - Adding controls expensive (real estate, cost)
- Errors becoming increasingly serious

Try and Try Again

Norman thinks that it often takes 5 or 6 tries to get something “right”

Case Study

Suppose you are designing an online learning/tutorial module for college students taking Math 141.

How do you apply these design principles in your project?

1. Visibility
2. Feedback
3. Affordance
4. Mapping
5. Constraint
6. Consistency

Team Project

Objective: Design an alternative interface for a computer-based application

You are free to pick your topics:

Design/redesign

- A webpage,
- A smartphone app, …

Team Project

Deliverables

- A written report of topic definition & understanding problem
- Design alternatives presentation
- Interim reports, e.g., evaluation plan, user testing report
- System prototype
- Final group presentation scheduled at the final exam time
- Final written report

Team Project Grading Policy

Grading policy (45% in your final grade)

- "Topic definition & understanding problem" (5%)
- Design alternatives presentation (5%)
- Final group presentation (10%)
- Final written report (15%)
- Participation grade (10%)
  - grades of interim reports * peer evals

Group Assignment

- Group assignment will be posted in Blackboard on Sunday, Sep. 8
- *Contact your team members and start to work on the team project*!

First Group Project Deliverable

Each group should submit a written report of “Topic definition and understanding of the problem” including

- An introduction of the topic
- A discussion about the system/interface's purpose and requirements
  - Who are the users
  - What are the system’s major functions
  - What are the environmental conditions and constraints
- A project management plan with a Gantt Chart

Each team only needs to submit a single report

Due in Blackboard 11:59 pm EST, Tuesday, Sep. 17

Working in Teams
Project Management

Project Planning

- Planning helps you
  - Identify tasks
  - Order tasks
  - Identify resources
- Estimate how long tasks will take
- Essentially all industry and government projects will require you to have a project plan

Pete's Estimating Laws

1. Everything takes longer than you think (esp. early on)
2. Schedules are (almost) always wrong.
3. Under-estimated early task affects later tasks
4. Good schedule estimate is 80% confidence for near term deliverables, 60-80% for long-term deliverables.
5. Revisit the schedule and revise your estimates

http://www.projectsteps.com/2006/08/petes-estimating-laws.html

How do you make a project plan?

How do you make a project plan?

- Define the scope and stay on track
  - What needs to be accomplished
    - What product is being developed
    - What information is going to be covered
  - Size of the project …
  - A kickoff meeting

How do you make a project plan?

- Identify target audience
  - Existing or new
  - Avoiding being too broad

How do you make a project plan?

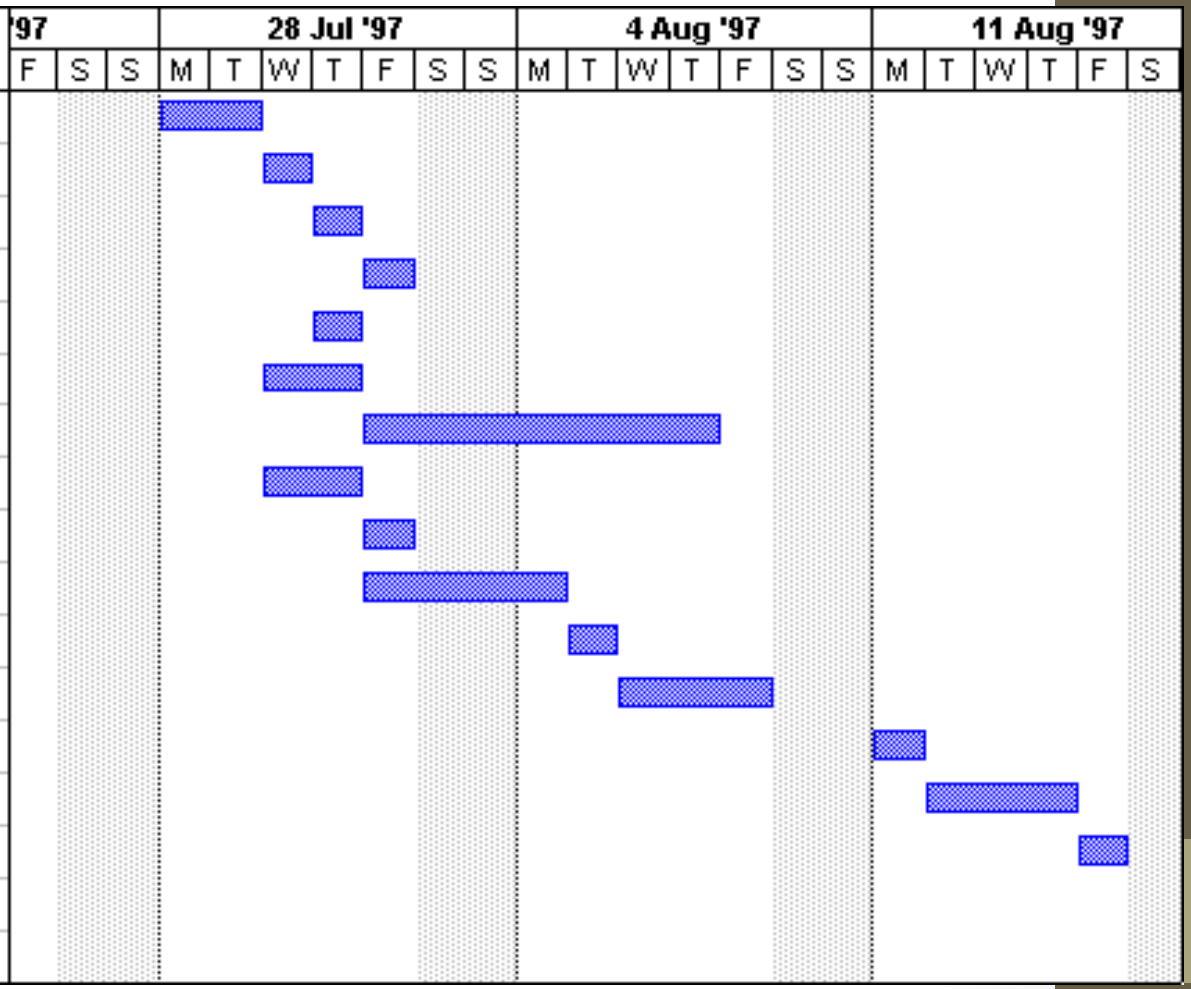
- Set measurable objectives
  - User goals – users' task scenarios
  - Usability goals – effective, efficient, etc.

Task Timelines (Gantt Charts)

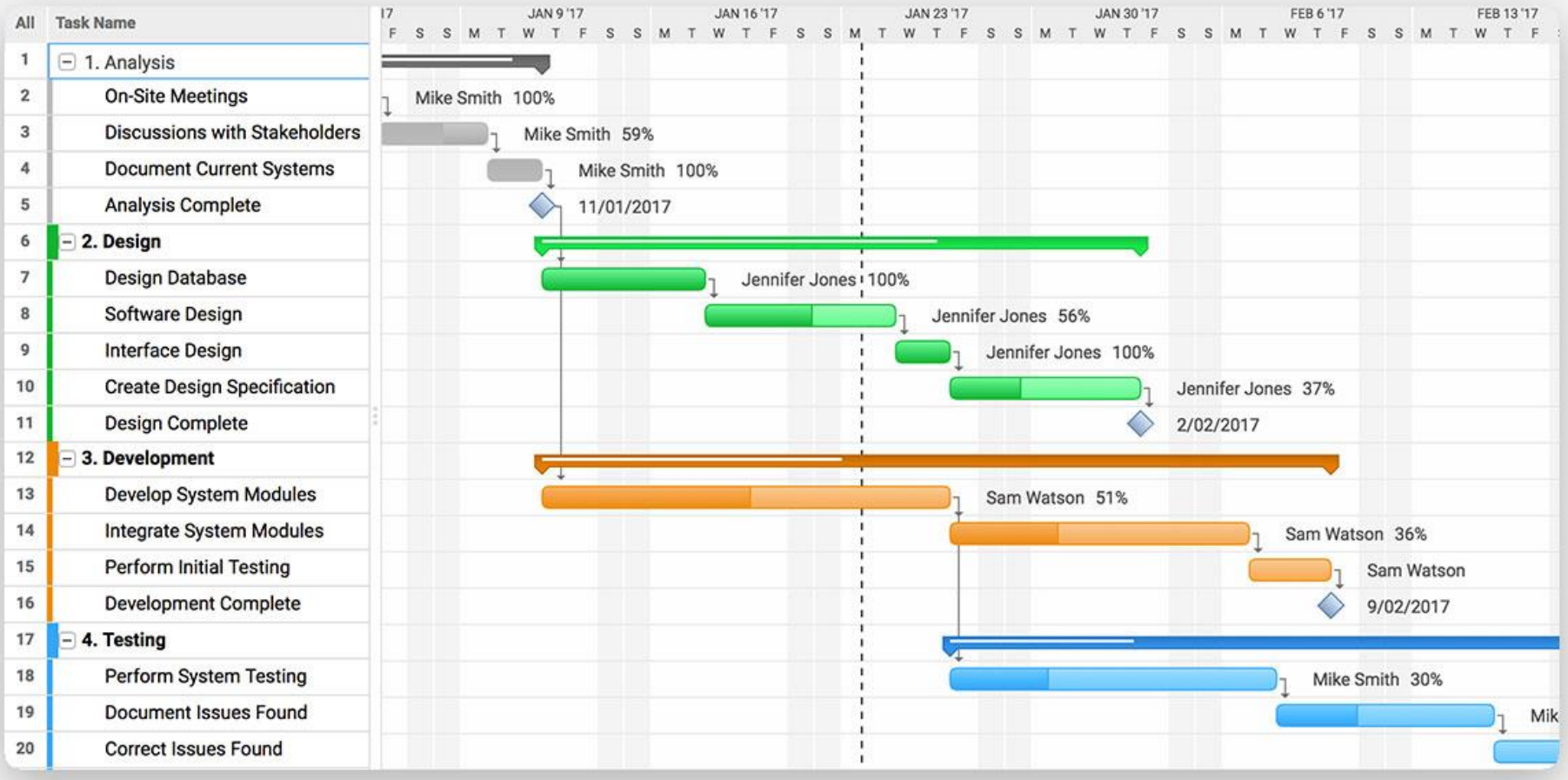
- Temporal view of the entire lifetime of the project
- Show when tasks take place and complete
- Useful for tracking progress: How does the actual progress compare with the planned schedule?
  - The timeline can show graphically how much of each task has been completed at a given time
  - Revisit the timeline as the project progresses

Gantt Chart (example 1)

ID	Task Name	Duration
1	Establish the need	2d
2	Set target date	1d
3	Establish leadtimes	1d
4	Book venue	1d
5	Choose advert location	1d
6	Agree format	2d
7	Devise tests	5d
8	Job description	2d
9	Set criteria	1d
10	Write advert	2d
11	Place advert	1d
12	Shortlist	3d
13	Invite candidates	1d
14	Conduct interviews	3d
15	Take decision	1d
16		
17		



Gantt Chart (example 2)



https://www.projectmanager.com/gantt-chart

What Dr. Tong expects to see

- Gantt Chart
  - Refer to this EVERY TIME YOU MEET WITH YOUR GROUP

Note taking - Document Responsibilities, due dates, goals

- I expect you to do this….
  - Who does What
  - Person, task, dependencies, who impacted
- Example
  - *"Georgette will interview 5 subject matter experts by this upcoming Friday and send the materials to Stephanie, who will transcribe the data. Transcription is planned to be done on the following Tuesday. Coding with the group is set for Wednesday."*
- **Document everything**

Quiz #1

Quiz # 1 is available in Blackboard.

Due date: 2:30pm EST, Thursday, Aug. 29

Open book and open notes