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# CP317 Projects

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Fall 2014

## Criteria

- Originality of concept
- Usefulness
- Technical achievements
- GUI
- Presentation

- Team organization
- Software life cycle model
- Your own deadlines

## Group organization 1

- We would complete all sections as a group.
- Each section will however, have a Phase Leader.

The Phase Leader will direct a meeting to organize requirements for the phase, divide up work for the phase, and be the figurehead for the phase.

If any group member has questions regarding their work on a given section or the section as a whole, they will be directed to the given Phase Leader.

## Group organization 2

- **Requirements:**

- As group:

- - Identify actors, scenarios, non-functional requirements and use cases
- A: - Identifying participation objects
- B: - Refining use cases and identifying relationship among use cases
- C: - Creating use case diagrams and further refining of use cases

## example of timeline

- **Project Timeline:**

- Tuesday, Oct. 10: Meeting to decide roles, duties, meeting requirements.
- Tuesday, Oct. 17: Meeting to discuss goals for Requirements phase. Hosted by Phase Leader – Requirements.
- Saturday, Oct. 21: Collaboration of work, assembled by Phase Leader – Requirements.
- Tuesday, Oct. 24: Meeting to discuss goals for OO Analysis phase. Hosted by Phase Leader – Analysis.
- Saturday, Oct. 28: Collaboration of work, assembled by Phase Leader – Analysis.
- Tuesday, Oct. 31: Meeting to discuss goals OO Design phase. Hosted by Phase Leader – Design.

## Project Components

- Outcome, deliverables
- Work, tasks, activities
- Schedule
- Resources

Outcome: deliverables are what you give customers

Work: task, or activities, is a unit of work. A task is the smallest amount of work that can be managed.

Schedule: timeline of the units of work.

Resources: people (participants), funds, equipment, facilities. People assume one or more roles.

## Project activities

- Planning
- Controlling
- Terminating

Planning: specifying the results to be achieved. Activities and Tasks to produce results.  
Make schedule, estimating resources

Organizing: Define organization of project. Identifying roles and responsibilities. Roles are mapped to work in the planning activity

Controlling: Identifying when actual activities deviate from planned ones.

Terminating: Delivering the system. Installing the system. Reviewing the project history to extract lessons.



## Skill Matrix

Task\ Participant	Bill	Mary	Sue	Ed
Control Design			P, I	
Database Design	P	P, I		I
U. I. Design			I	
Conf. Managemet	S			I

User Interface Design

P: primary

S: secondary

I: interest

## Top level design

- Software architecture
- Subsystem decomposition should be high level
  - Focus on functionality
  - Good analysis should make subsystem decomposition stable
  - New subsystems may be created during design phase

- Subsystem decomposition serves as basis of organization units
- Subsystem decomposition = Work Break Down structure
- detail in: **Object oriented software engineering**, by Bruegge and Dutoit, Pearson-Prentice Hall

A **work breakdown structure (WBS)**, in [project management](#) and [systems engineering](#), is a deliverable-oriented decomposition of a project into smaller components.

A work breakdown structure element may be a [product](#), [data](#), [service](#), or any combination thereof. A WBS also provides the necessary framework for detailed cost estimating and control along with providing guidance for schedule development and control.

## Work Breakdown Structure

Use case	W B S
Authenticate	<ol style="list-style-type: none"><li>1. Realize the authenticate use case<ol style="list-style-type: none"><li>1. Develop user interface forms</li><li>2. Realize authenticate protocol with server</li><li>3. Develop initial account creation</li></ol></li></ol>

Develop user interface: forms, login, change PIN

## Work Breakdown Structure

Use case	W B S
Withdraw money	<ol style="list-style-type: none"><li>1. Develop money withdraw use case<ol style="list-style-type: none"><li>1. Develop user interface forms</li><li>2. Realize communication with server</li><li>3. Develop business logic for approving withdrawal</li><li>4. Develop interface for cash distributor</li></ol></li></ol>

Develop user interface: select account, specify amount,

<b>Subsystem</b>	<b>W B S</b>
User Interface	Develop User Interface
Control	Develop Control Subsystem
Database	Develop Database Sub.

## Group composition

- Creative Common License --attribute
  - Let the instructor know...

## Project evaluation

- expected equal contribution, same marks
- If unexpected
  - Peer evaluation: give your group member a mark between 1 and 5
  - ...with justification
  - Instructor will use common sense



## Project deadlines

- Thursday Oct 23, at 1PM: Submit your app proposal.
- Thursday Oct 30, at 1PM: three-page preliminary report on OO Requirements and Signed work division document. Hard copy and electronic copy (P1).
- Thursday November 6, at 1PM: three-page preliminary report on OO Analysis. Hard copy and electronic copy (P2)
- Thursday November 13, at 1PM: three-page preliminary report on OO Design . Hard copy and electronic copy(P3)
- Tuesday November 27, at 1PM: complete report (requirements, analysis, and design) in hard copy and electronic copy (P4)
- Monday Dec 1, midnight: The implementation of the app (P5)
- Tuesday Dec 2: App presentation, in class (P6)

Diagrams and figures are not counted toward the page requirement

## Project mark distribution

Group submission	Percentage of final project marks
P1	3
P2	3
P3	4
P4	40
P5	50
P6	20