



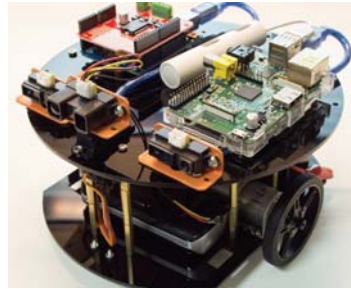
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CSC279

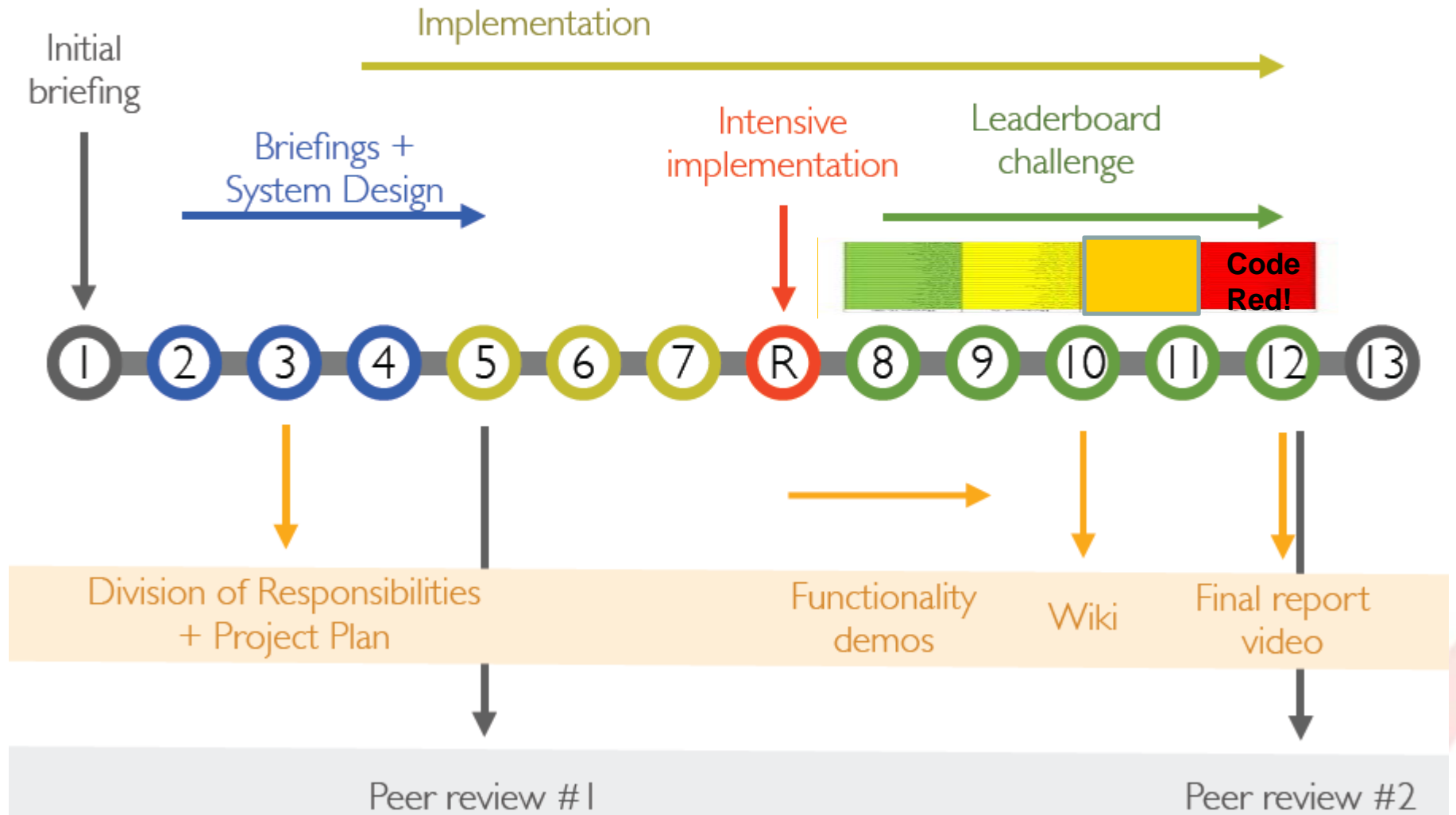
Project Planning

MDP TASK

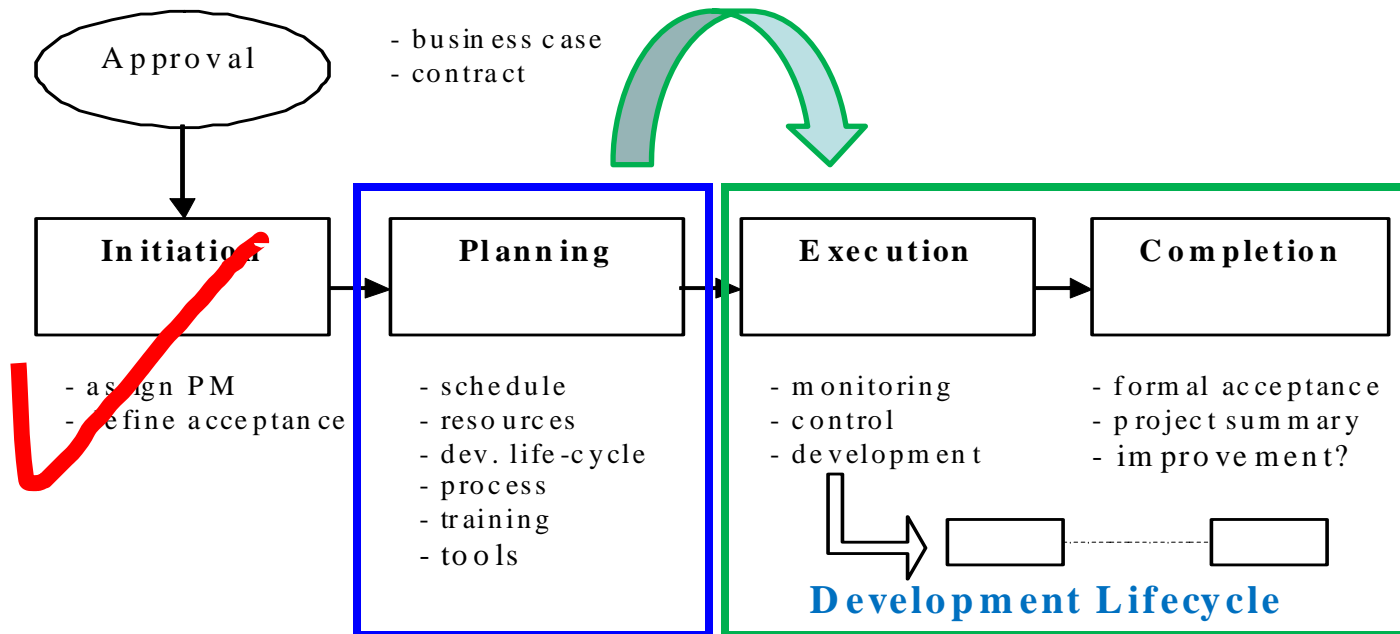
- Build a robotic system that can
 - Autonomously explore + traverse an unknown area, avoiding obstacles
 - Plan and follow fastest path from X to Y
 - Transmit telemetry + receive control signals from mobile device
 - Simulate physical robot and algorithms in software



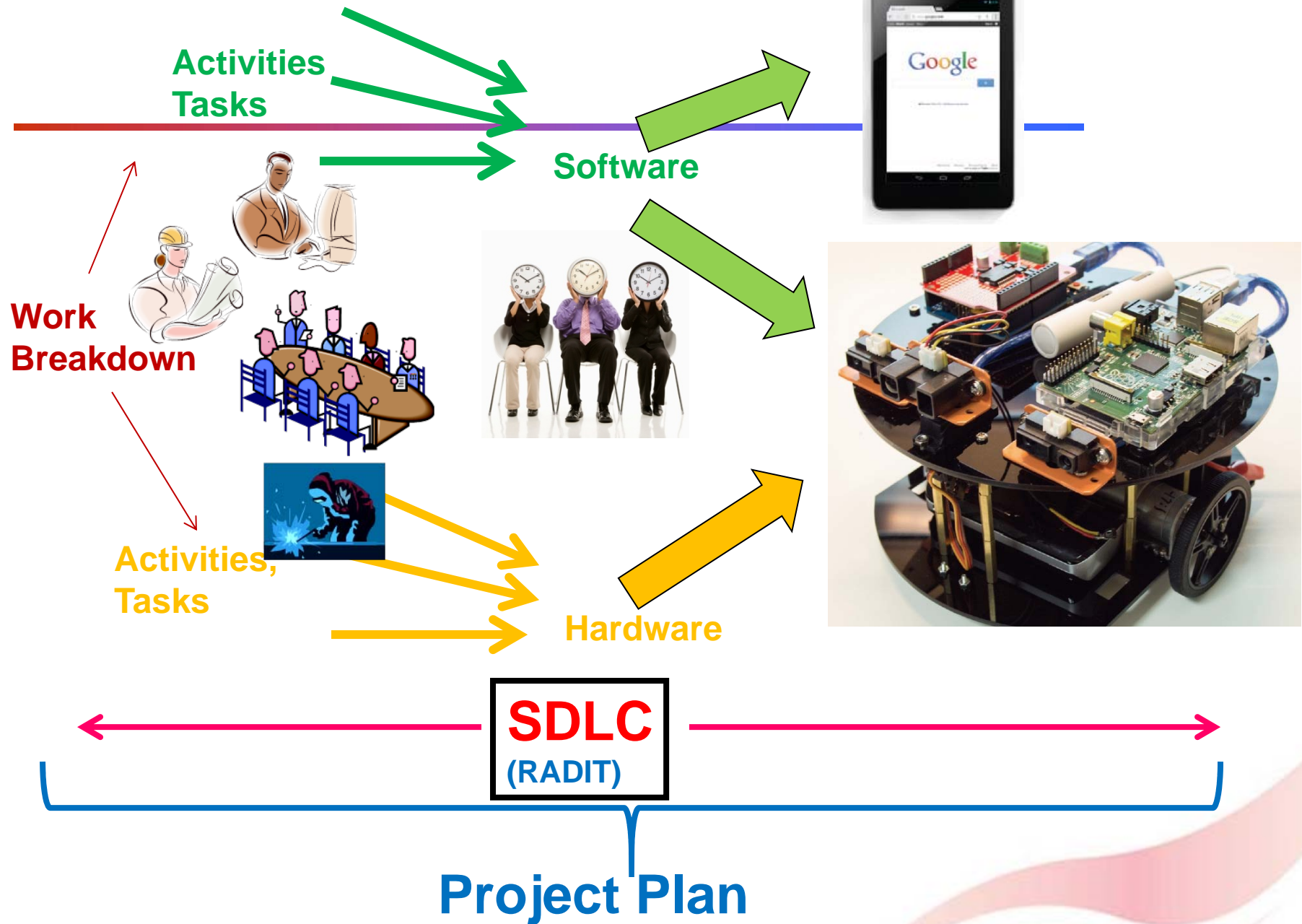
TIMELINE



Project (Management) Lifecycle



What to do,
Who to do,
How to do.



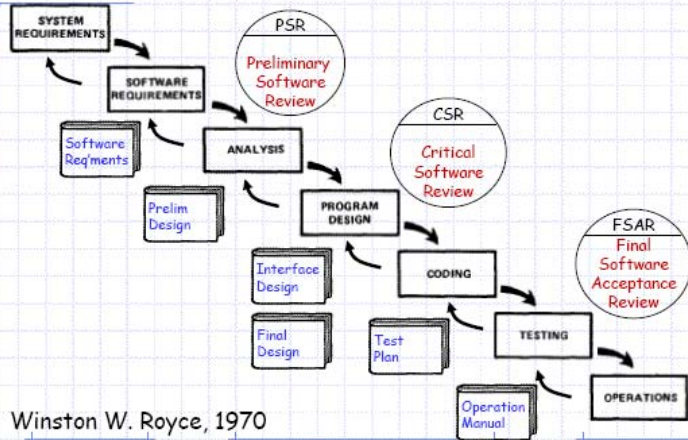
Project Plan structure

- Project Objectives.
- Project Scope.
- Work Breakdown Structure (WBS).
- Project Organisation.
- Project Approach & Strategy.
- Risk Management.
- Project Estimation & Schedule.



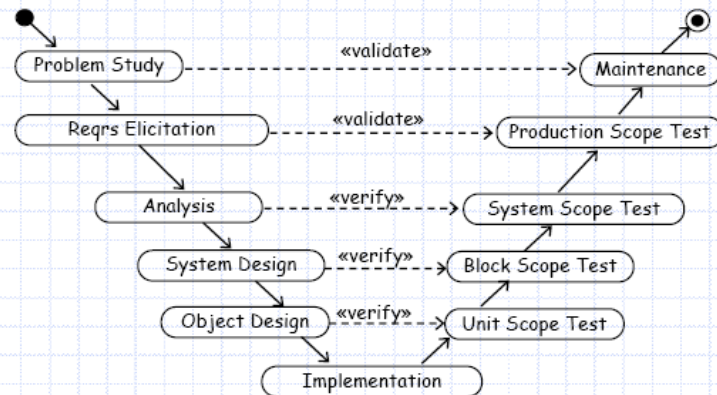
SDLC Model

The Waterfall is systematic & sequential

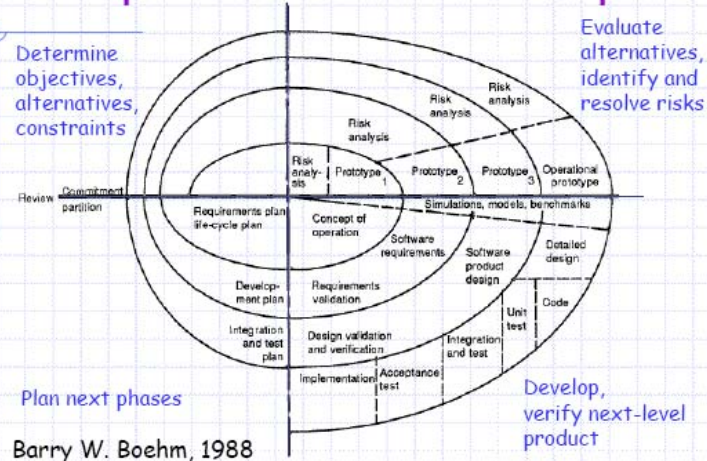


Winston W. Royce, 1970

The V emphasizes validation and verification



The Spiral addresses risk upfront

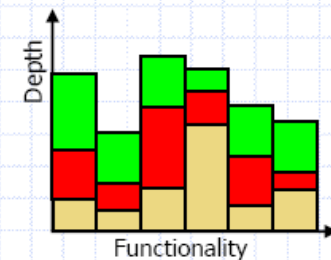
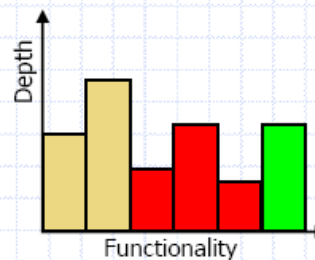


Barry W. Boehm, 1988

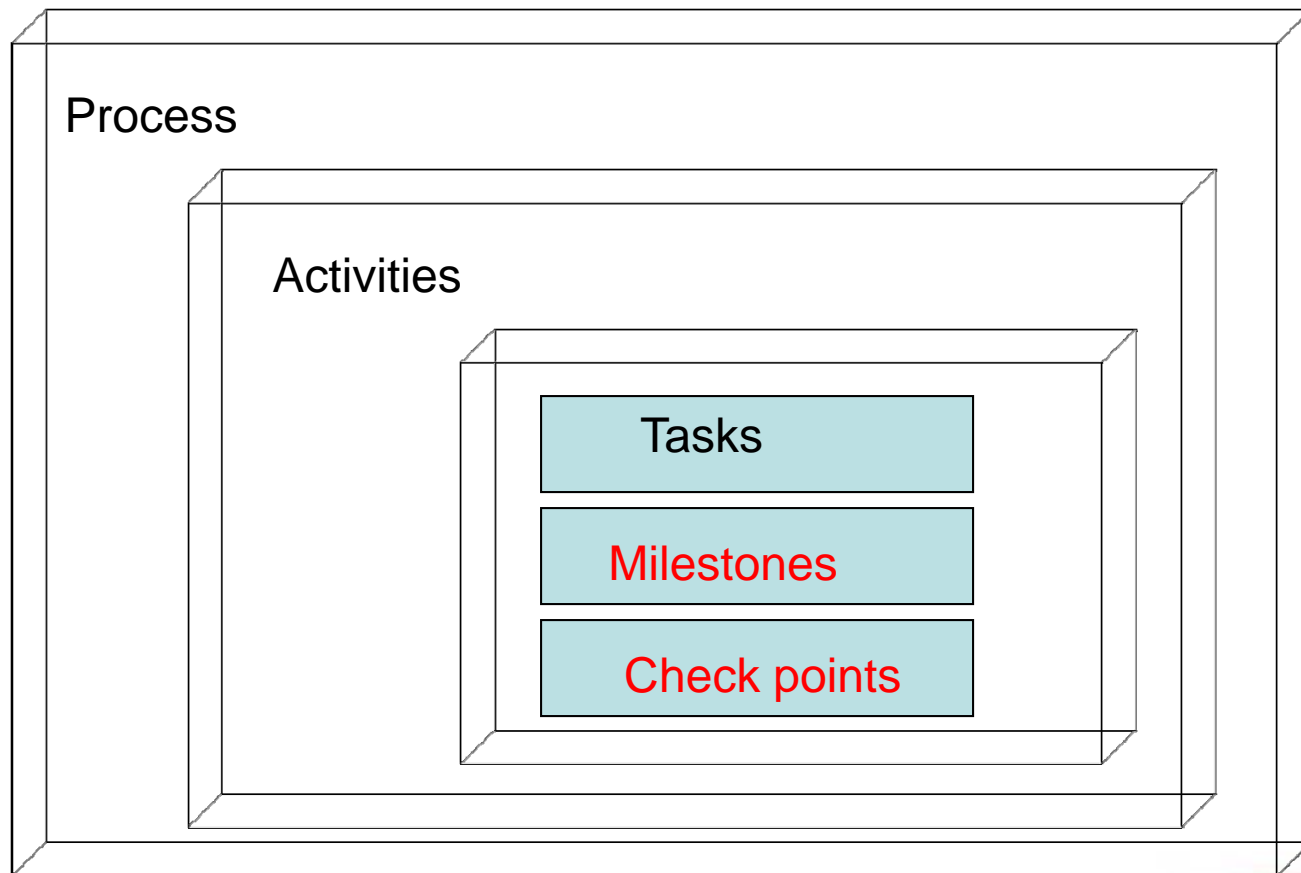
Incremental & Iterative Development is cyclical

Incremental Development
parts of the system are developed at different times or rates, and integrated as they are completed

Iterative Development
parts of the system are re-visited for revision and improvement



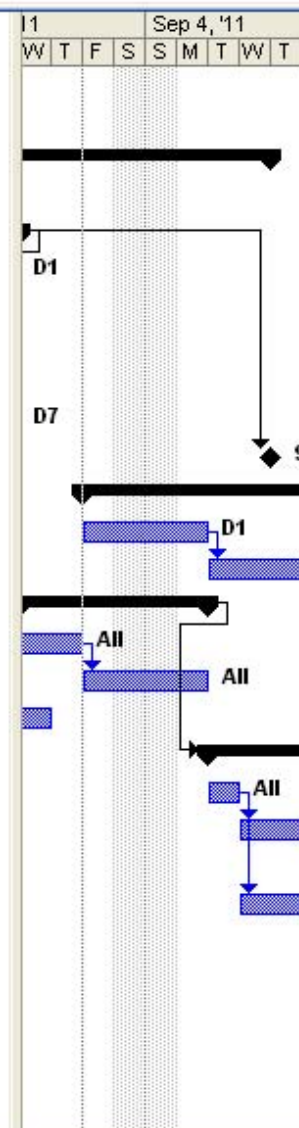
Process Decomposition



ASSESSMENT

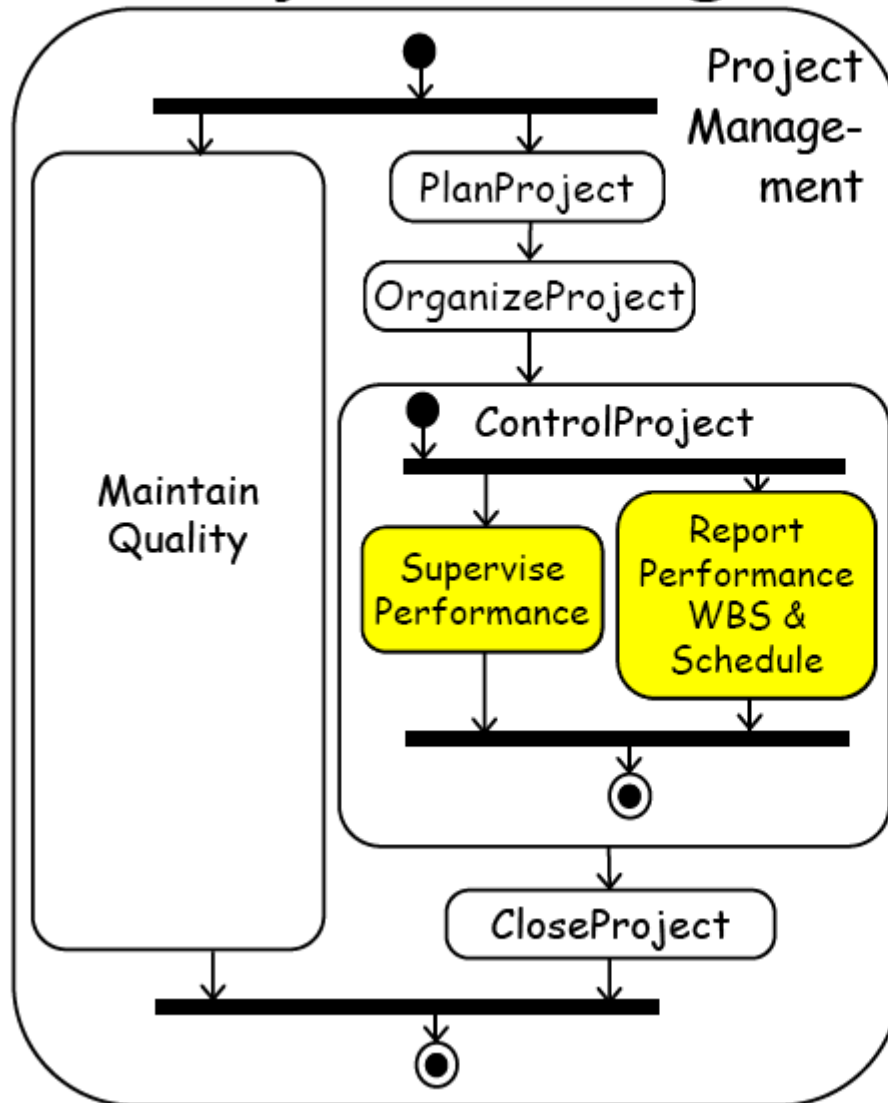
Group assessment (60%)		
Division of responsibilities, project plan	10%	End Week 3
System functionality	20%	End Week 9
Project wiki	15%	End Week 10
Final report video	15%	End Week 12
Competitive group assessment (15%)		
Leaderboard performance ranking	15%	Weeks 8-12
Individual assessment (25)%		
Early-stage peer review	5%	Week 5
Final-stage peer review	20%	Week 12

	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	Project Initiation	0 days	Fri 8/26/11	Fri 8/26/11		
2						
3	Requirement	9 days	Fri 8/26/11	Thu 9/8/11	1	
4	requirement gathering	1 day	Fri 8/26/11	Fri 8/26/11		All
5	SRS documentation	2 days	Mon 8/29/11	Tue 8/30/11		
6	UC1	2 days	Mon 8/29/11	Tue 8/30/11	4	D1
7						
8						
9						
10	UC2	2 days	Mon 8/29/11	Tue 8/30/11	4	D7
11	Submit SRS	0 days	Thu 9/8/11	Thu 9/8/11	5	PM
12	Learning	7 days	Fri 9/2/11	Mon 9/12/11		
13	Environment setup	2 days	Fri 9/2/11	Mon 9/5/11		D1
14	Python/PHP/STRUTS framewo	5 days	Tue 9/6/11	Mon 9/12/11	13	All
15	Analysis	4 days?	Wed 8/31/11	Mon 9/5/11	5	
16	Domain Classes	2 days	Wed 8/31/11	Thu 9/1/11		All
17	Architecture Design	2 days	Fri 9/2/11	Mon 9/5/11	16	All
18	1 day?	Wed 8/31/11	Wed 8/31/11		
19	Design	13 days?	Tue 9/6/11	Fri 9/23/11	15	
20	Common - diagrams	1 day?	Tue 9/6/11	Tue 9/6/11		All
21	UC1 - seq diagram/Class	2 days	Wed 9/7/11	Thu 9/8/11	20	D1
22						
23	UC8 - seq diagram/Class	2 days	Wed 9/7/11	Thu 9/8/11	20	D7
24	Submit Design Doc	0 days	Fri 9/23/11	Fri 9/23/11		
25	Implementation	3 days	Fri 9/23/11	Tue 9/27/11	19	
26	Web Design	3 days	Fri 9/23/11	Tue 9/27/11		
27	DB admin	3 days	Fri 9/23/11	Tue 9/27/11		
28	UC1 + Unit Test	3 days	Fri 9/23/11	Tue 9/27/11		D1
29						



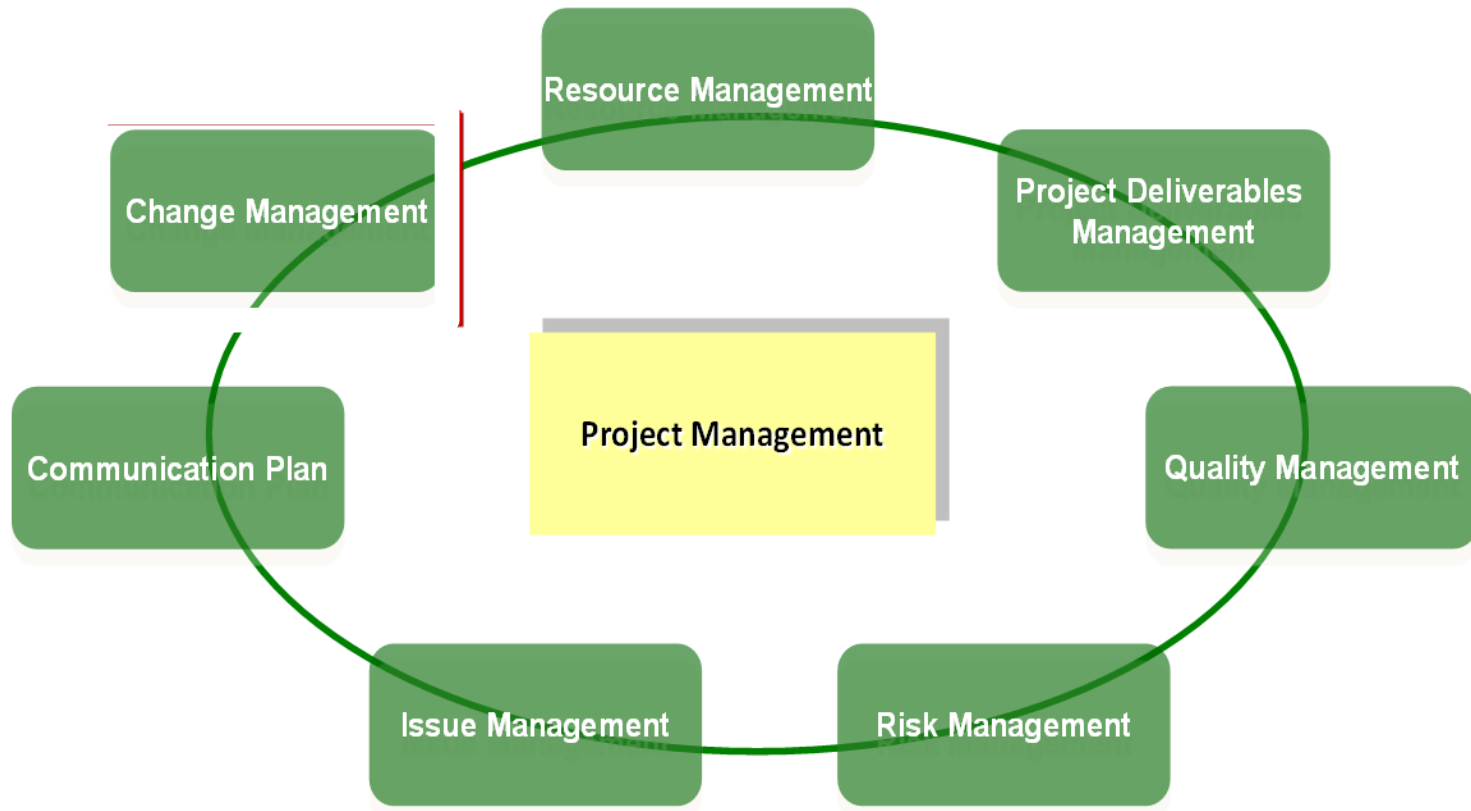


Project Management Activities



- Conduct progress meetings
- Monitor metrics
- Manage risk

Project Management & Communication



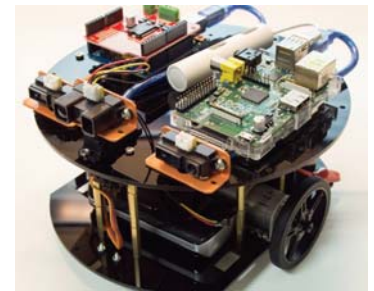
Plan what you going to do !

Do what you planned !

**Prove that you did it
according to planned !**

Decorative wavy lines in the bottom right corner, transitioning from light pink to white.

Successful Project = project delivered
On time, within budget, with required
scope and expected quality



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Project Plan Submission (10%)

Deadline : 10th Feb 2014 (Mon)

2359hrs (11:59pm)

Venue : EdveNTUre online

(under Assignments).

Format : MS Word / PDF

*(Limit report to 15 pages based on provided template,
including Project Schedule and Gann Chart)*

**Note that TWO (2) marks (upon 50 marks) will be
deducted for the delay submission of each calendar day.**

Assessment Criteria:

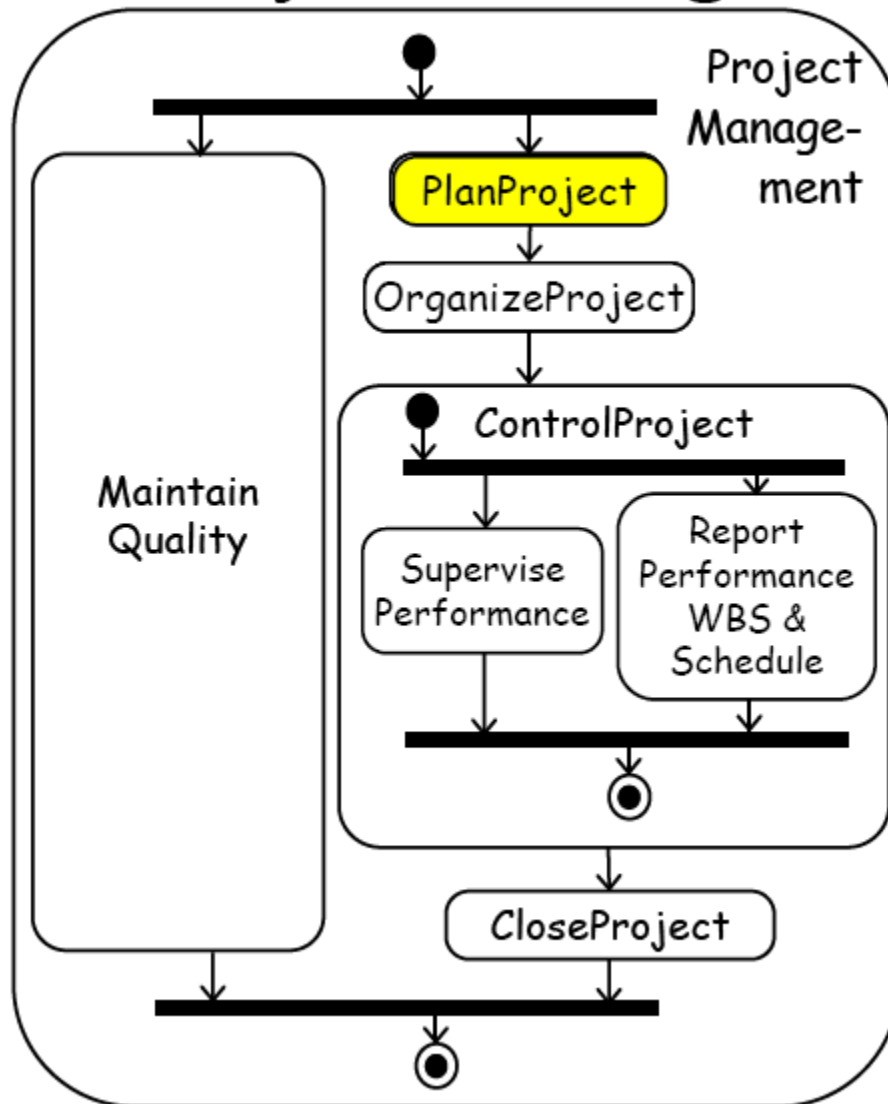


1. **Project understanding and Strategy Planning –**
Details clarity and relevance of the planned strategy in meeting project objectives and scope. **(20 marks)**
2. **Work breakdown –** Details clarity and relevance of the planned activities - tasks(ownership and distribution) to be performed, tasks dependencies and timeline estimation. **(20 marks)**
3. **Risk Management –** Clarity and relevance of risks to be mitigated and mitigation strategies. **(10 marks)**

Essential Slides from ***Software Engineering*** **Course**

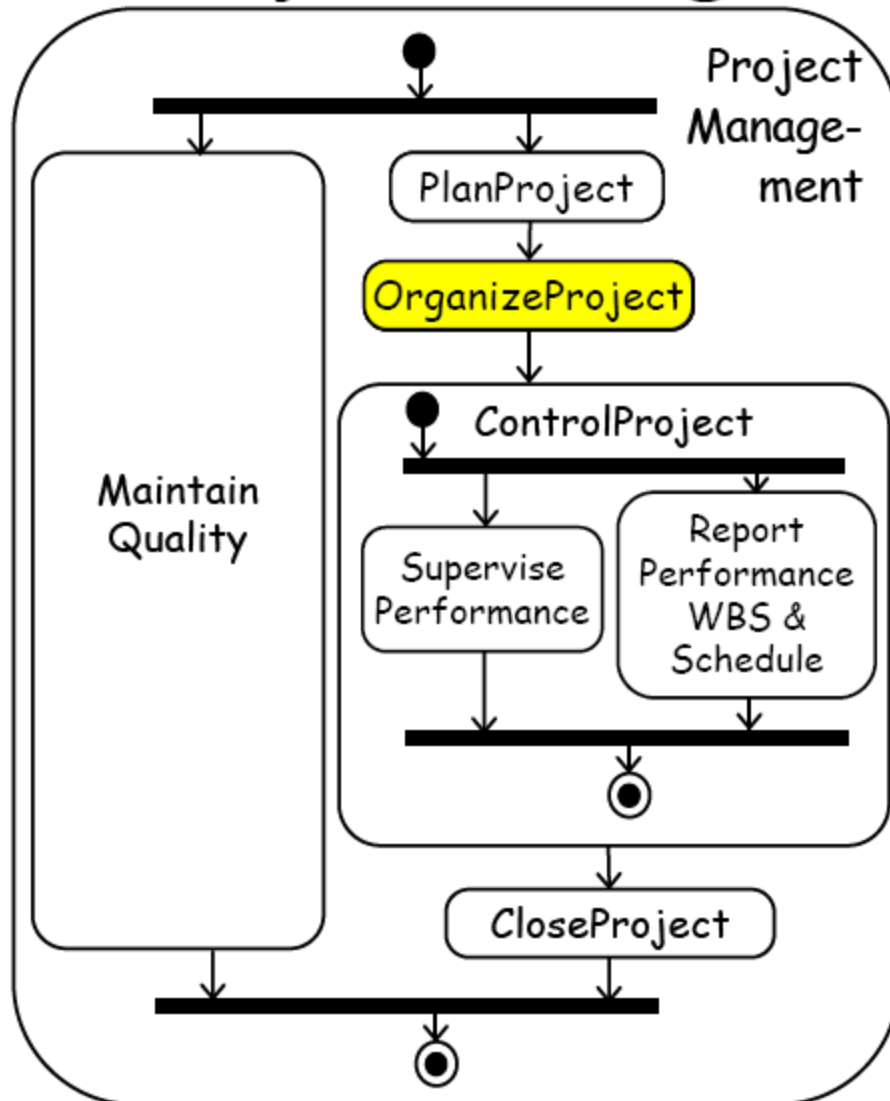


Project Management Activities



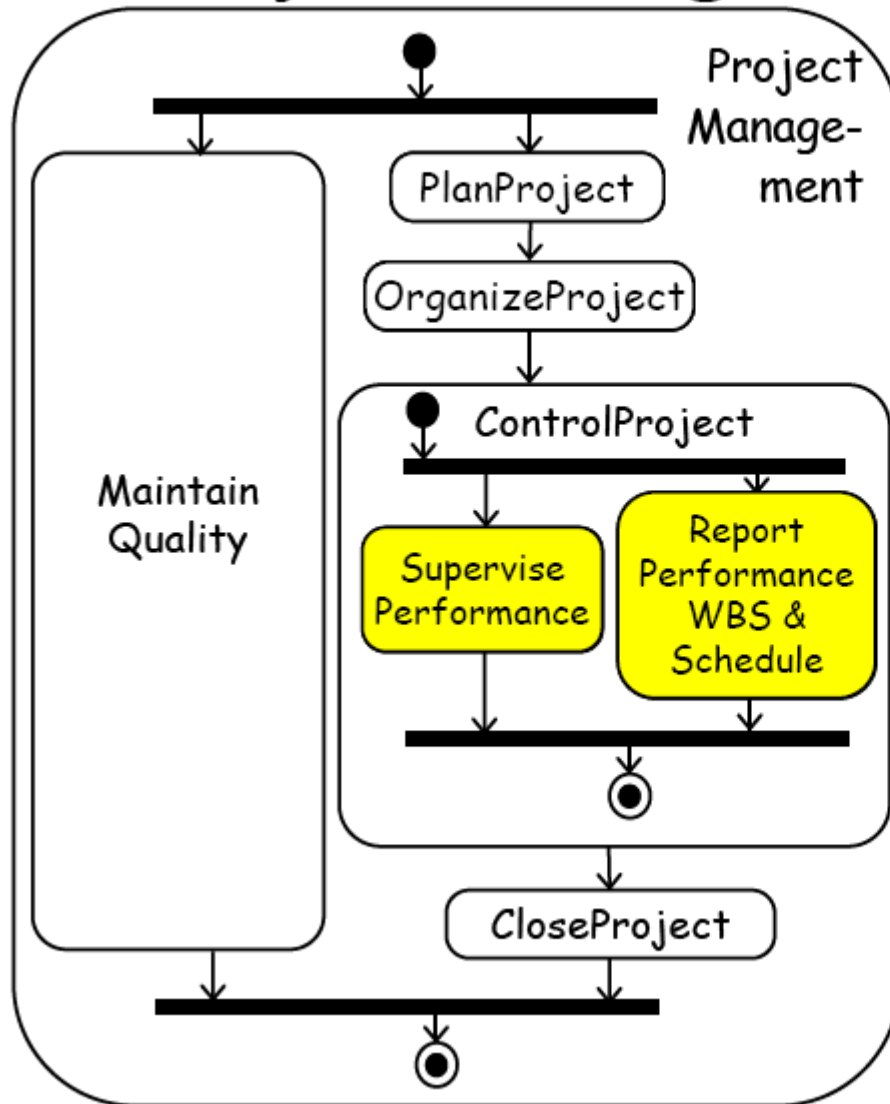
- Define problem
- Define top-level design
- Identify task model
- Develop Project Management Plan

Project Management Activities



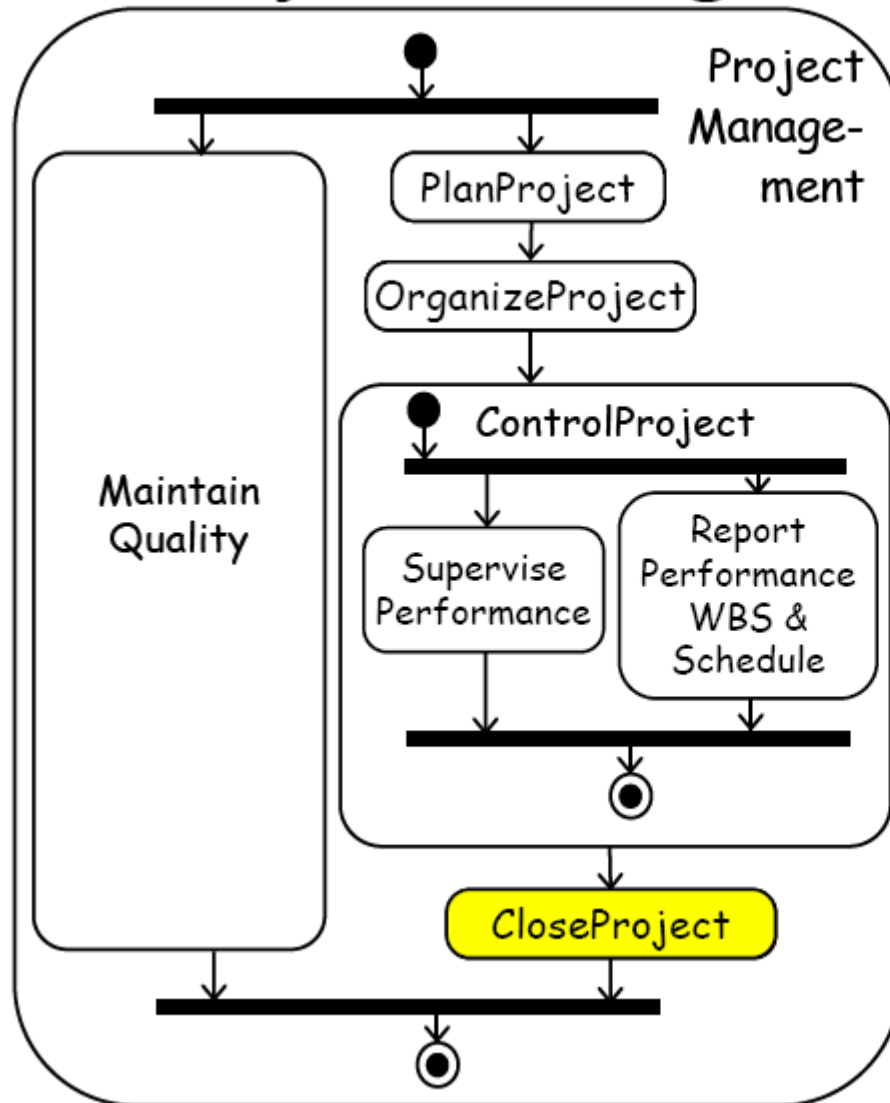
- ◆ Set up communication infrastructure
- ◆ Assign roles and assemble teams
- ◆ Identify skills and hire
- ◆ Agree on scope
- ◆ Organise kick-off meeting

Project Management Activities



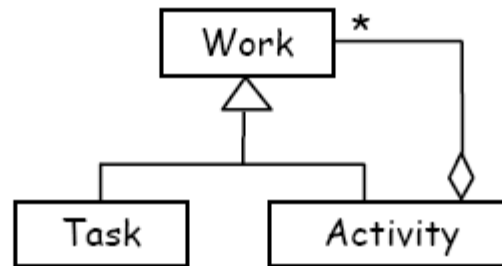
- Conduct progress meetings
- Monitor metrics
- Manage risk

Project Management Activities



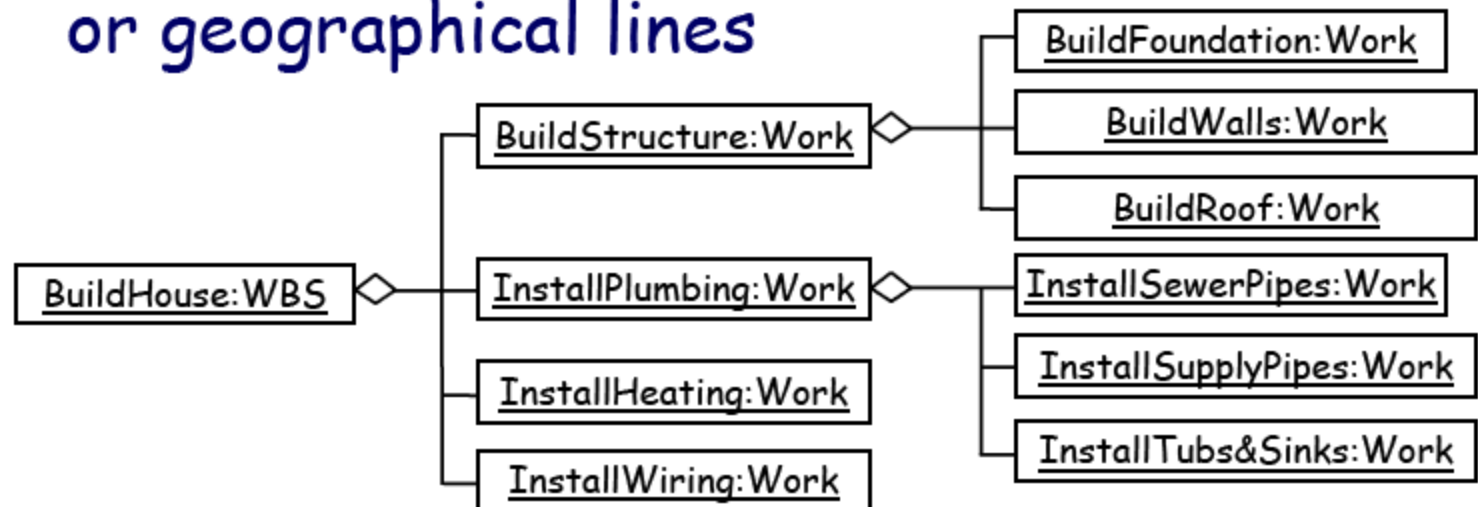
- Conduct acceptance test
- Monitor installation
- Conduct post-mortem

Work is tasks, activities and functions assigned to individuals or teams



- Task is well-defined work assignment, with description, duration, assigned resource, dependency and clear acceptance criteria
- Task is smallest unit of work subject to project management
- Task is small enough to be doable, whose duration can be estimated and can be assigned to single person

- Work Breakdown Structure is hierarchical representation of all tasks in project
- ◆ Derived from Statement of Work (project scope)
- ◆ Divide and conquer
- ◆ Decomposition along functional, subsystem or geographical lines



Tasks are scheduled on Calendar

- Schedule is marked by Milestones and Baselines
- Milestones are often linked to development budget payments
- Baselines are critical points when major decisions are formalised and finalised

Controlling the Project

- Obtain accurate project status
- Highlight problems
- Address departures from schedule
 - Meetings
 - Metrics
 - Risk management

FYP vs MDP

