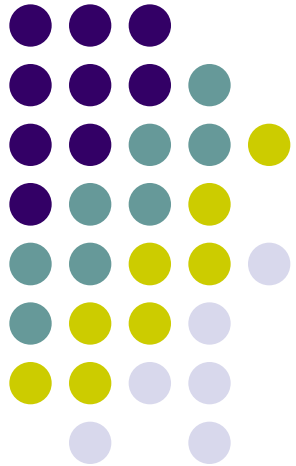
Volunteer Management System

Presented by Team SE18-08S



Content

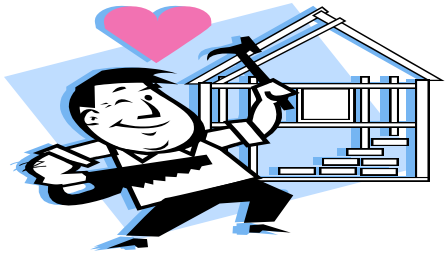
- Introduction
- Overview of Requirements
- Project Risks
- Project Strategies
- Project Plan
- Project Progress
- Management Challenges
- High Level Architecture
- Transition to Next Stage
- Q & A

Volunteer Management System

INTRODUCTION

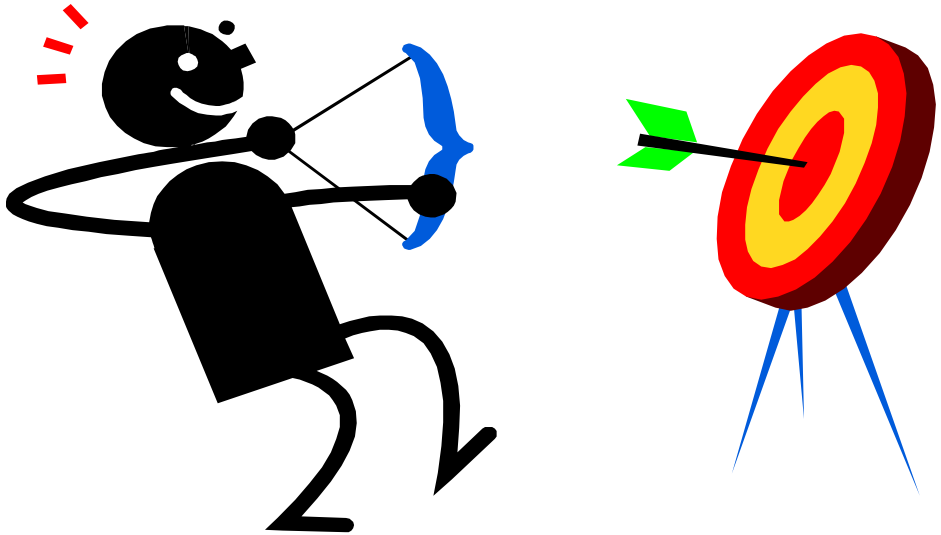
Introduction – Organisation Background

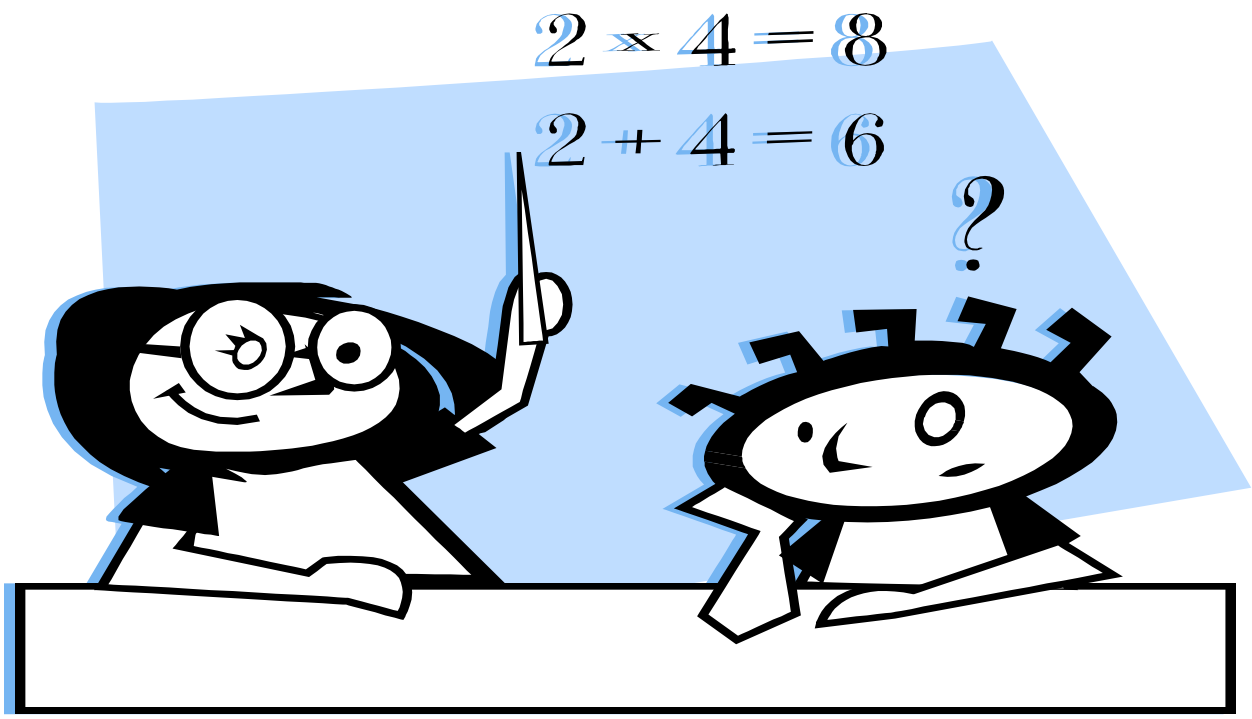
- Objective of Non-Government Organisation (NGO) – Eliminate poverty
- Has grown tremendous over the years which attracts more volunteers.
- A need to coordinate and manage the volunteers.
- Manual handling of paperwork and volunteers requires lots of work and limits the efficiency of the organisation.



Introduction – System Objective

- To provide an integrated system with the aim of addressing the problems of volunteer communication, documentation, recruitment and retention.





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OVERVIEW OF REQUIREMENTS

Overview of Requirements

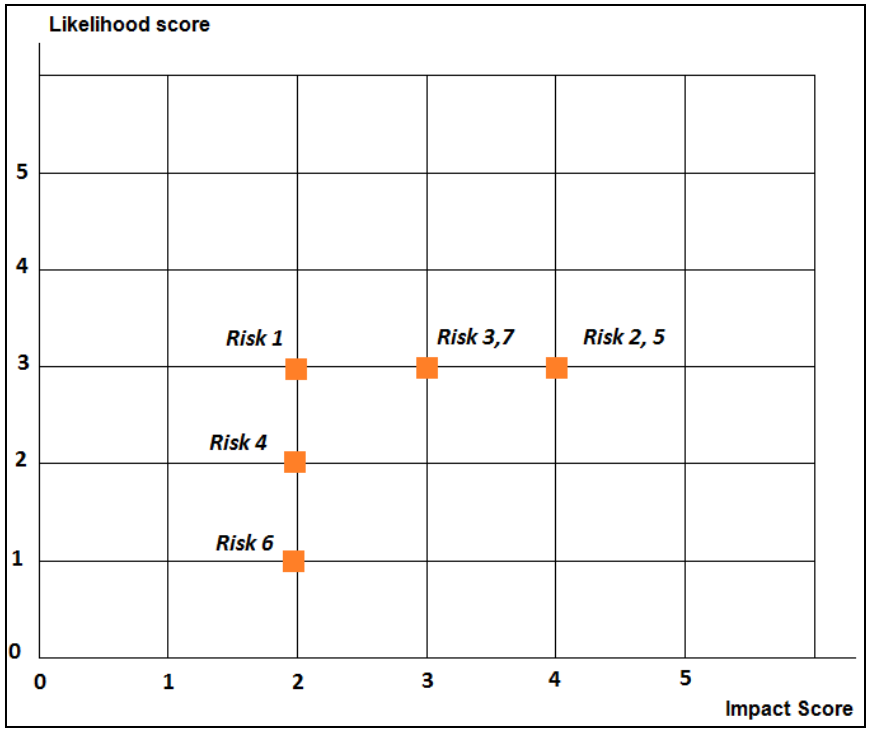
- Volunteer Management
- Staff Management
- Project Management
- Itinerary Management
- Administration

Volunteer Management System

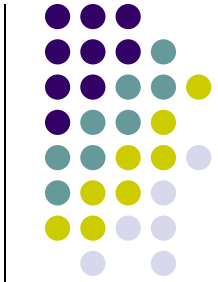
PROJECT RISKS

Project Risks – Prioritized list

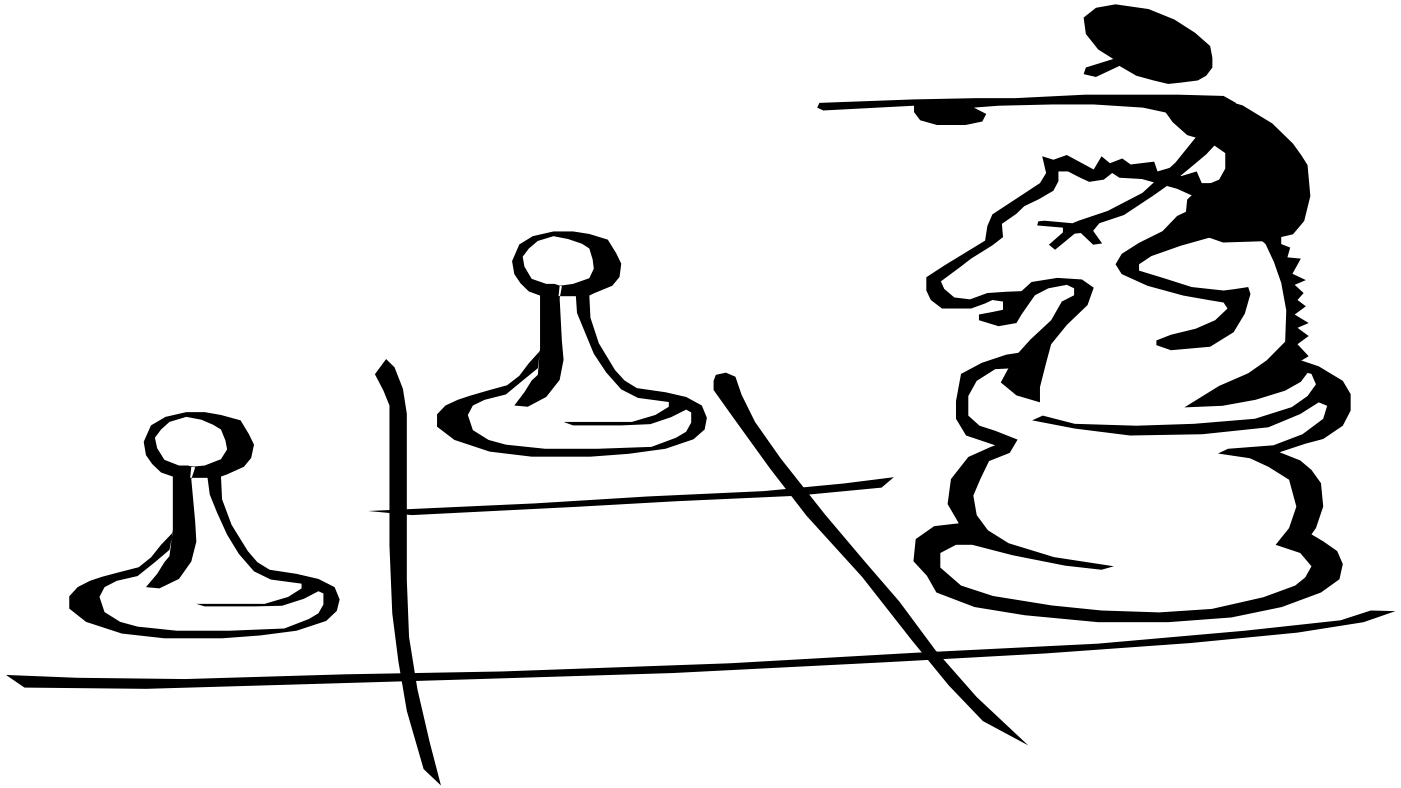
#	Risk Item	Impact	Likelihood
1	No Project management skills set	2	3
2	Team member may not be available during the project timeline	4	3
3	Customer may lose commitment and availability	3	3
4	Not domain expert and not much knowledge in Volunteer Management	2	2
5	Not all team member have technical knowledge for: - Presentation Layer (YUI2, DWR) - Data Access Layer (Hibernate)	4	3
6	Not sure of the User Interface requirements	2	1
7	Portability risk : system need to support multiple browsers, multiple platforms	3	3



Project Risk – Risk Management Techniques



S/N	Risk Item	Control Type	Specific Details
1	No Project management skills set	Risk Localization Risk Insurance	Gain PM skills by on the job training Shadow a few people to work with common tasks and knowledge
2	Team member may not be available during the project timeline	Risk Insurance Risk Avoidance	Each key project role will have backup personnel Schedule carefully to anticipate all unavailability upfront
3	Customer may lose commitment and availability	Risk Avoidance Risk Transfer Risk Insurance	Look for alternative customer Appoint team member as putative customer Strengthen and ensure customer commitment
4	Not domain expert and not much knowledge in Volunteer Management	Risk Transfer Risk Localization	Assign team members to gain domain knowledge by attending similar voluntary activities Research and study similar Volunteer Management systems
5	Not all team member have technical knowledge for: - Presentation Layer (YUI2, DWR) - Data Access Layer (Hibernate)	Risk Localization Risk Insurance	Technical Architect to do training for team members to be familiar with the technology Do early prototype to study the technology upfront
6	Not sure of the User Interface requirements	Risk Localization Risk Minimization	Produce early prototype to gather UI requirements Request customer to define thorough UI requirements Update UI specs as and when requested
7	Portability risk : system need to support multiple browsers, multiple platforms	Risk Localization Risk Minimization	Do prototype to test the compatibility/portability against browsers Perform research for each key components to ensure maximum compatibility Aim to at least support IE7+ (other browsers for later)



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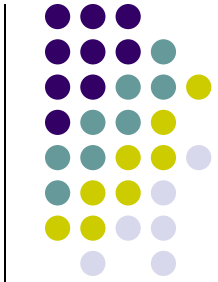
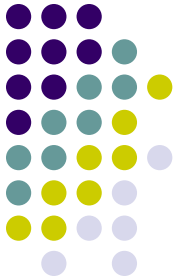
PROJECT STRATEGIES

Project Strategies – Management Strategies

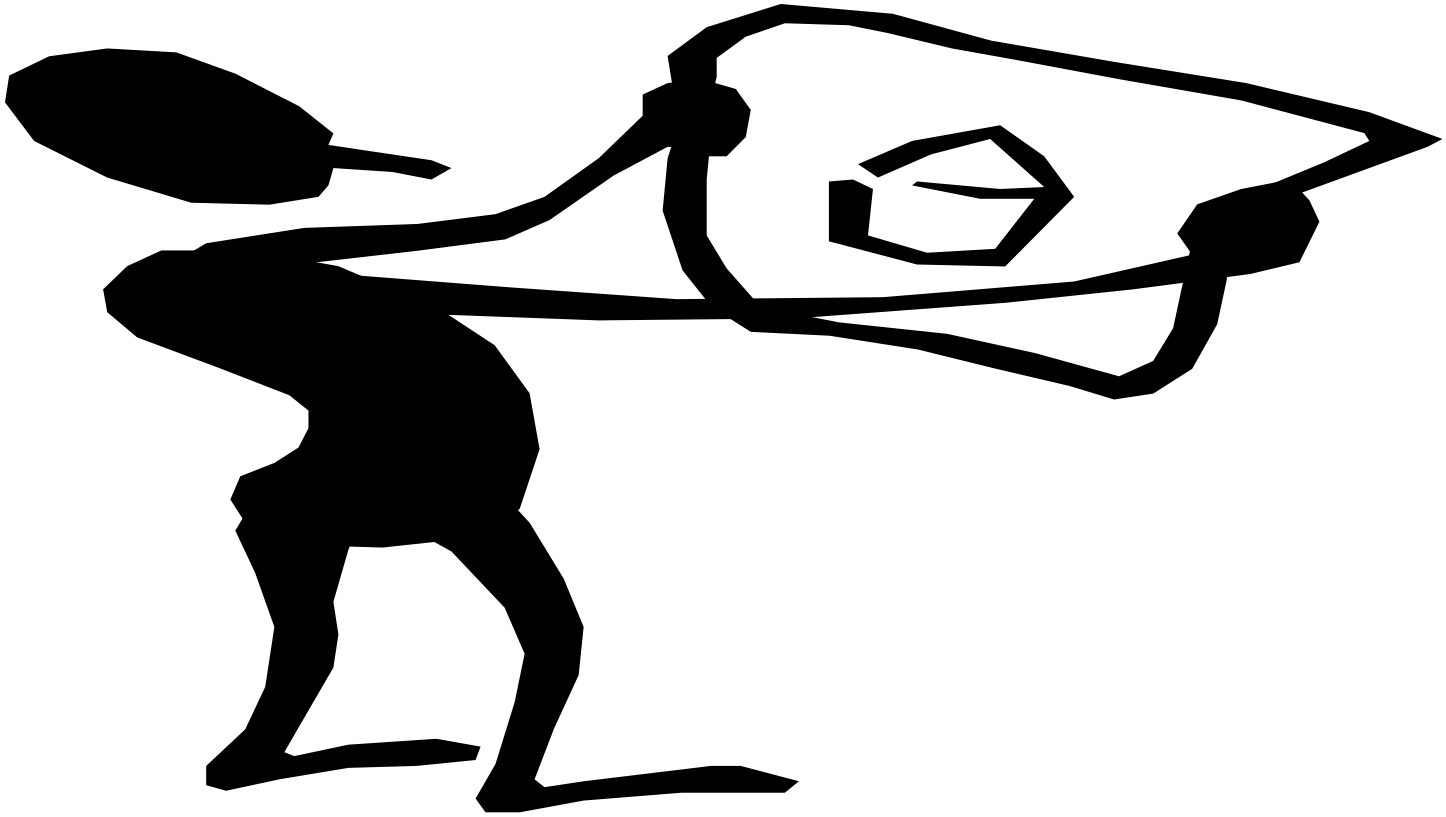


- Active member involvement
  - Involve all team members by clear and thorough communication
- Clearly define roles and responsibilities
  - Assign tasks to staff by capability and experience
- Active risk management
  - Anticipate risk early, accept and mitigate following the risk management techniques
- Enforce tracking practices
  - Monthly progress update

Project Strategies – Technical Strategies



- Develop technical prototype
  - Explore uncertain technologies through prototype
- Gain technical knowledge through training



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PROJECT PLAN

Project Plan – Team structure

No	Name	Role
1.	Phung Kim Cuong, Dio	Project Manager
2.	Zaw Htet	Technical Lead
3.	Thida Khin Myo Thaung	Business Analyst
4.	Hnin Nu Aye	Business Analyst
5.	Feng Yan	Development Lead
6.	Jiang Jifa	Test Lead
7.	Liu Peishan	Quality Manager

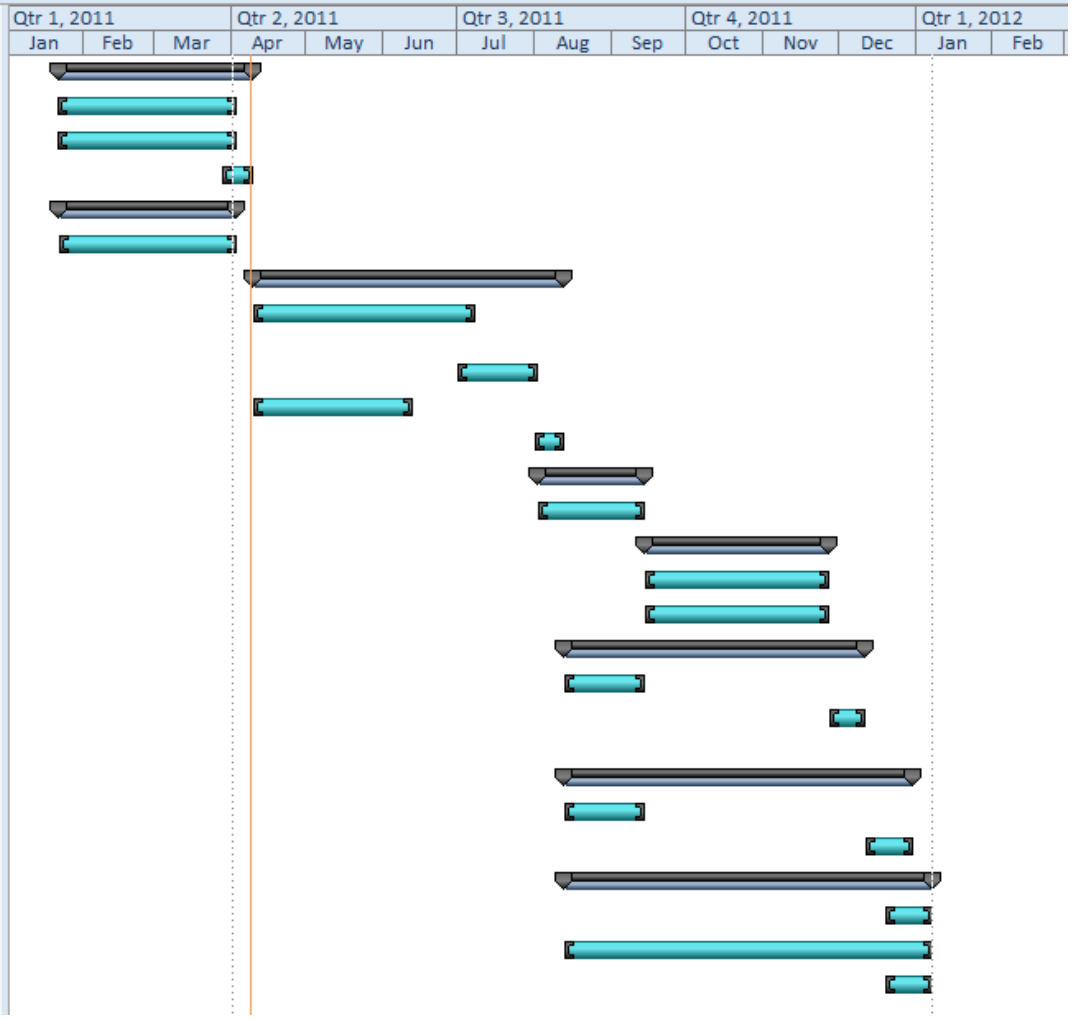
Note: All team members will be programmer as well.

Project Plan – Milestones

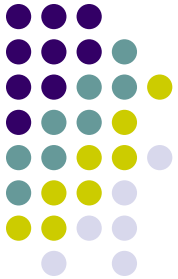
Activity	Approx. start date	Approx. end date
Produce Project Plan	21 Jan 2011	02 Apr 2011
Produce Quality Plan	21 Jan 2011	02 Apr 2011
Produce URS	22 Jan 2011	02 Apr 2011
Produce Functional Specs	10 Apr 2011	07 Jul 2011
Produce High-level DS	1 Jul 2011	1 Aug 2011
Produce Prototyping Study Report	10 Apr 2011	12 Jun 2011
Produce detailed DS	02 Aug 2011	13 Sep 2011
Produce System Code	14 Sep 2011	26 Nov 2011
Integrate System Code	14 Sep 2011	26 Nov 2011
Prepare test documentation & perform testing	13 Aug 2011	30 Dec 2011
Produce Final Project report	20 Dec 2011	07 Jan 2012
Produce User Guide	20 Dec 2011	07 Jan 2012

Project Plan – Gantt Chart

Task Name	Duration	Start	Finish
Project Planning	**57 days**	**Sat 22/01/11**	**Sat 09/04/11**
Produce Project Plan	52 days	Fri 21/01/11	Sat 02/04/11
Produce Quality Plan	52 days	Fri 21/01/11	Sat 02/04/11
Prepare First Audit & Presenta	11 days	Mon 28/03/11	Sat 09/04/11
Requirement Analysis	**52 days**	**Sat 22/01/11**	**Sat 02/04/11**
Produce User Requirements S	52 days	Sat 22/01/11	Sat 02/04/11
Analysis Modelling	**91 days**	**Sun 10/04/11**	**Fri 12/08/11**
Produce Functional Specifications : UCMS and	65 days	Sun 10/04/11	Thu 07/07/11
Produce High-level Design Spe	22 days	Fri 01/07/11	Mon 01/08/11
Produce Prototyping Study Re	47 days	Sun 10/04/11	Sun 12/06/11
Prepare Second Audit & Prese	10 days	Mon 01/08/11	Fri 12/08/11
Design Modeling	**31 days**	**Tue 02/08/11**	**Tue 13/09/11**
Produce detailed DS	31 days	Tue 02/08/11	Tue 13/09/11
Programming	**54 days**	**Wed 14/09/11**	**Sat 26/11/11**
Produce System Code	54 days	Wed 14/09/11	Sat 26/11/11
Integrate System Code	54 days	Wed 14/09/11	Sat 26/11/11
Integration System Test	**87 days**	**Sat 13/08/11**	**Sun 11/12/11**
Produce SIT plan, test script a	23 days	Sat 13/08/11	Tue 13/09/11
Perform System Integration Test and corrective actions	12 days	Sun 27/11/11	Sun 11/12/11
User Acceptance Testing	**101 days**	**Sat 13/08/11**	**Fri 30/12/11**
Prepare UAT plan, test script a	23 days	Sat 13/08/11	Tue 13/09/11
Perform UAT	15 days	Mon 12/12/11	Fri 30/12/11
Project Report and Closure	**107 days**	**Sat 13/08/11**	**Sat 07/01/12**
Produce Final Project report	15 days	Tue 20/12/11	Sat 07/01/12
Produce User Guide	107 days	Sat 13/08/11	Sat 07/01/12
Produce Project Presentation &	15 days	Tue 20/12/11	Sat 07/01/12

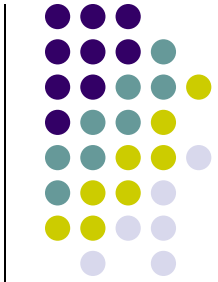


Project Plan – Effort Estimation



PROJECT EFFORT ESTIMATION (man-day)								
#	Activity Description	Dio (PM)	Peishan (QM)	Thida (BAL)	Hazel (BA)	Zaw (TL)	Feng Yan (DL)	Jifa (TSL)
1	**Project Planning**							
1.1.	Produce Project Plan	4						
1.2.	Review Project Plan	1.5	1.5					
1.3.	Produce Quality Plan		4					
1.4.	Review Quality Plans	1	1					
1.5.	Prepare first Audit & Presentation	2	2	1	1	1	1	1
2	**Requirement Analysis**							
2.1.	Research Requirements	2.5		5.5	5.5			
2.2.	Produce User Requirements Specifications			3	2.5			
2.3.	Review User Requirement Specifications	1.5	1.5	1.5				
3	**Analysis Modeling**							
3.1.	Identify Analysis Objects/Ops/Attributes			5	5	5	5	
3.2.	Produce Class/Collaboration Diagrams			5	5	5	5	
3.3.	Produce User Case Model Survey (Analysis)			5	5	5	5	
3.4.	Write Use Case Realization Report (Analysis)			2.5	2.5	2.5	2.5	
	Individual total	64	62	76.5	75.5	89	86	71.5
	Project Total	**524.5**						

Project Plan – Effort Calculation by FPC



Unadjusted Function Point Count Summary

ITEM	LOW	AVERAGE	HIGH	TOTAL
External Input	27x3=81	2x4=8	0x6=0	89
External Output	3x4=12	0x5=0	0x7=0	12
Internal File	13x7=91	0x10=0	0x15=0	91
Interface File	0x5=0	0x7=0	0x10=0	0
External Inquiry	6x3=18	0x4=0	0x6=0	18
			Unadjusted Function Points	210

Calculate Value Adjustment Factor

CHARACTERISTIC	DI	Reasons
Data Communications	2.5	VMS is an online system with moderate number of users
Distributed Functions	4	The system will be built with multi-tier architecture where system components will be on different boxes
Performance	1	There is no special requirements for performance
Heavily Used Configuration	0	Configuration not mentioned in the URS
Transaction Rate	1	There are only moderate number of end users

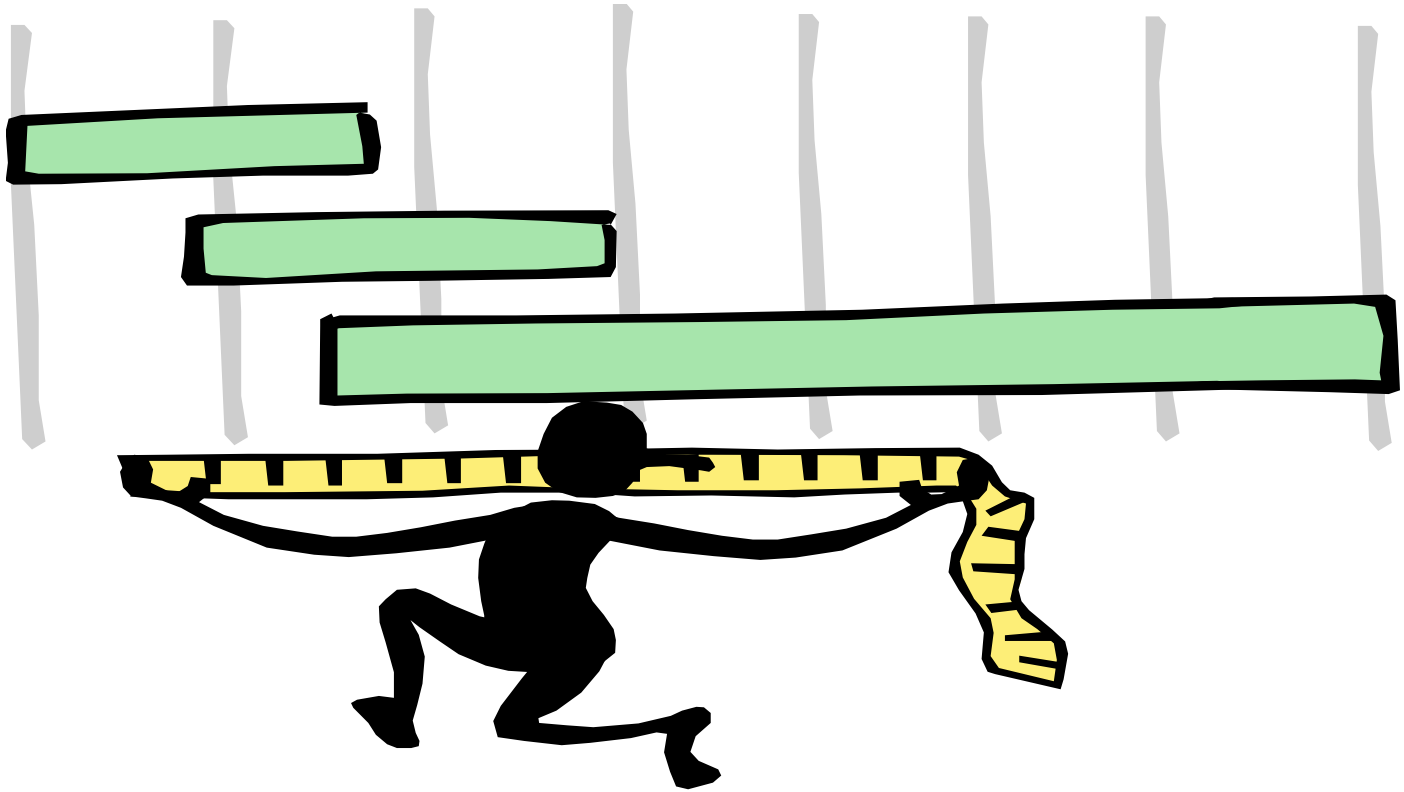
Adjusted Function Point Count Summary

Adjusted Factor = 0.65 + 0.01 * 23	0.88
Adjusted FPC = Unadjusted FPC * Adjusted Factor	184.8

Project Plan – Effort estimation by COSTAR 7

Programming language	Java
Translation factor	29
Lines of Code = Translation factor * FPC = 29 * 184.8 * (1 + Breakage) = 29 * 184.8 Note: (i) % Breakage = 0 (It is assumed that requirement will not change) (ii) The system will not reuse any existing software	5359 SLOC
Development Effort =	20.3 man-months
Schedule =	11.0 months

Refer to Appendix A for more details



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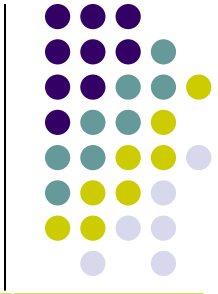
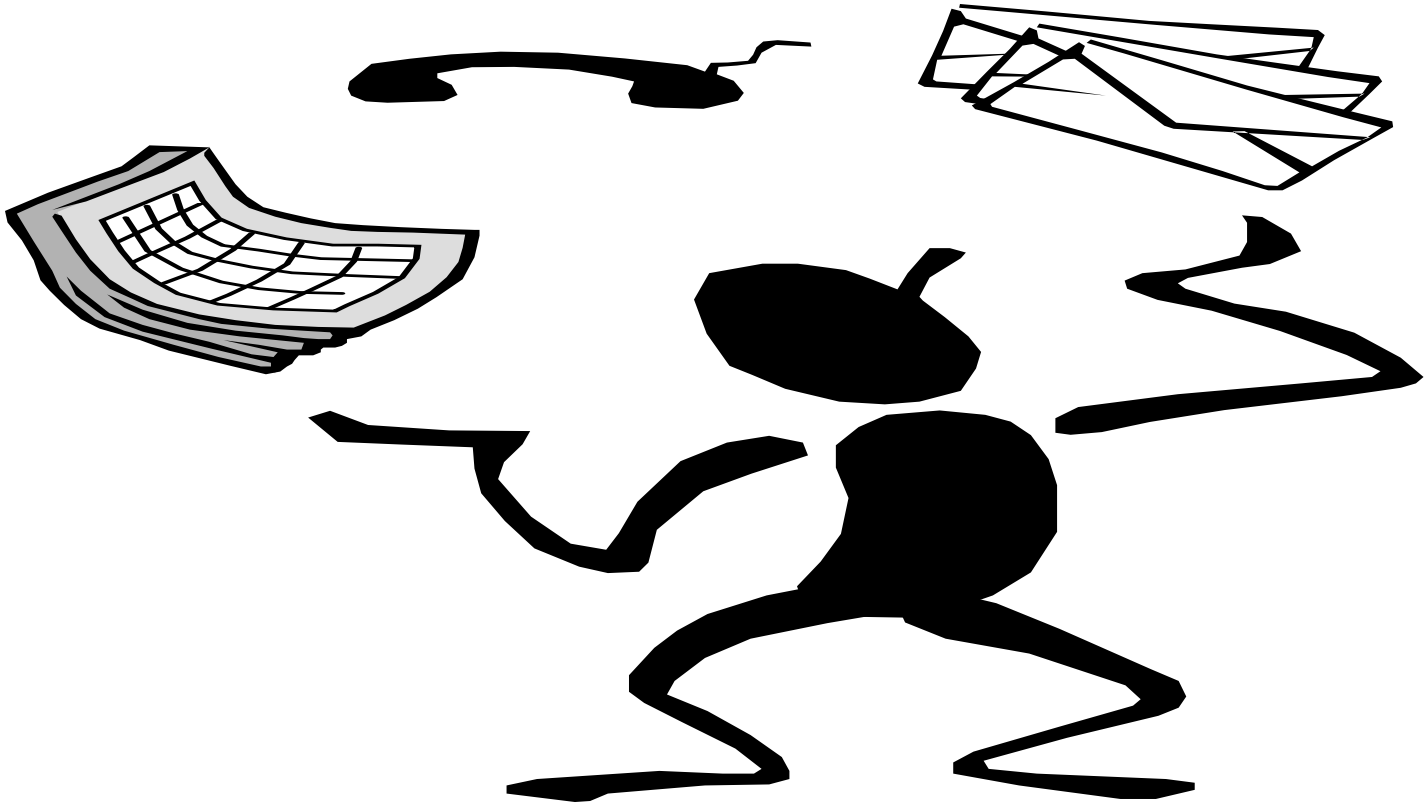
PROJECT PROGRESS

Project Progress



No	Activity	Planned Start Date	Planned End Date	Actual Start Date	Actual End Date	Planned Effort	Actual Effort	Task Status	Comments
1	**Project Planning**								
1.1	Produce Project Plan	21 Jan 2011	02 Apr 2011	20 Feb 2011	09 Apr 2011	7	9	Done	Requirements gathering issues.
1.2	Produce Quality Plan	21 Jan 2011	02 Apr 2011	20 Feb 2011	05 Apr 2011	6	6.025	Done	Makes changes based on Audit Meeting feedback
1.3	Prepare First Audit & Presentation	21 Jan 2011	02 Apr 2011	03 Apr 2011	09 Apr 2011	9	9	Done	
2	**Requirement Analysis**								
2.1	Produce User Requirements Specifications	22 Jan 2011	02 Apr 2011	20 Jan 2011	02 Apr 2011	18	13.6875	Done	
3	**Analysis Modelling**								
3.1	Produce Functional Specifications : UCMS and UCRR (Analysis)	10 Apr 2011	07 Jul 2011			38		Open	
3.3	Produce Prototyping Study Report	10 Apr 2011	12 Jun 2011			17.5		Open	



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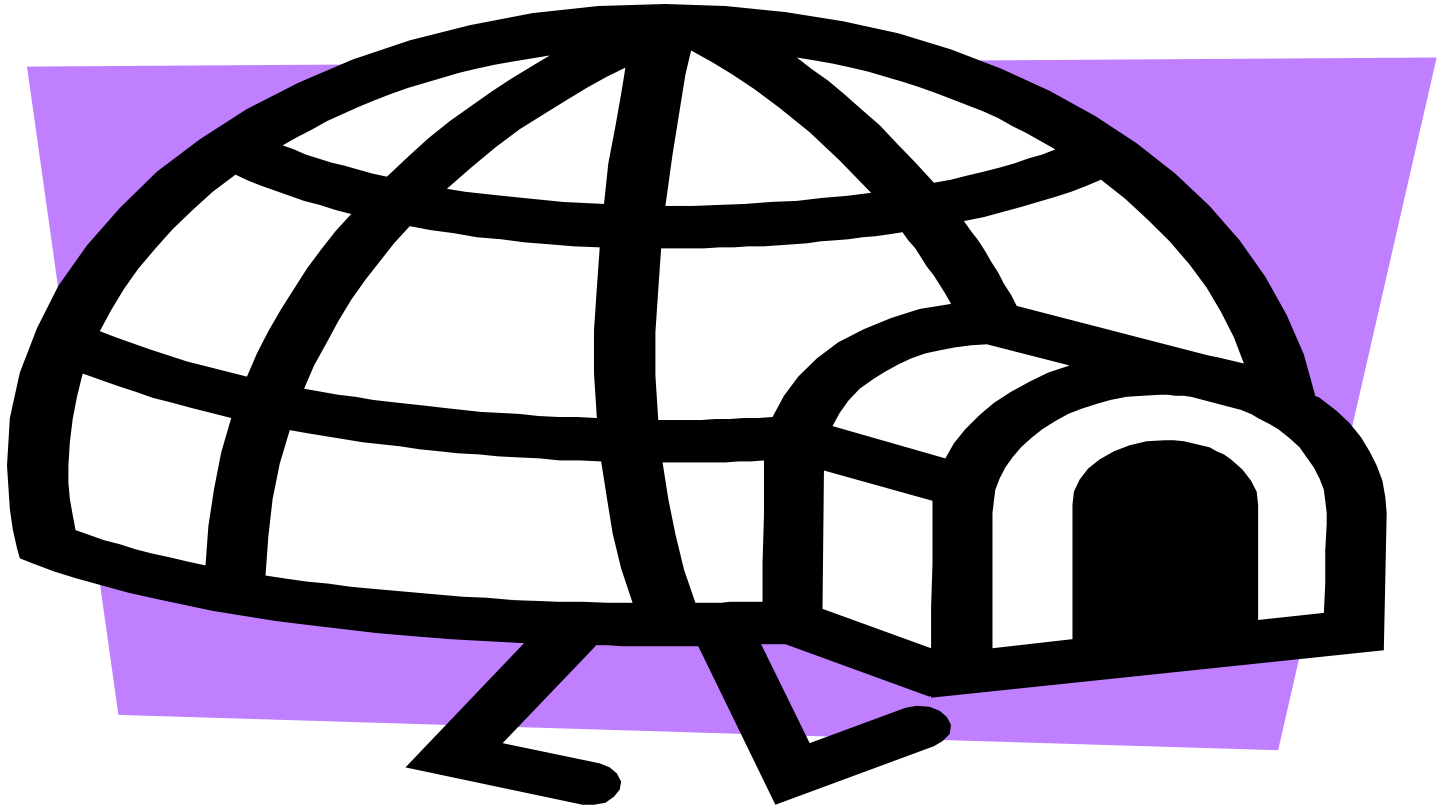
MANAGEMENT CHALLENGES

Management Challenges

No	Challenge	Description	Solution
1.	Communications	Difficulty to gather all members for discussions.	•Online meeting via Skype •To fix a weekly meeting time
2.	Requirements Gathering	Client only wants a small set of requirements.	•Seek lecturers advice •Proposed merging of requirements •Appoint team members as putative end users •Look for alternative customer
3.	Task Control	Not able to meet deadline on time.	•To log time log •To hold meetings to track status
4.	Low Quality of Work	Deliverables not up to standard.	•Perform reviews •Conduct briefing and demo on required items



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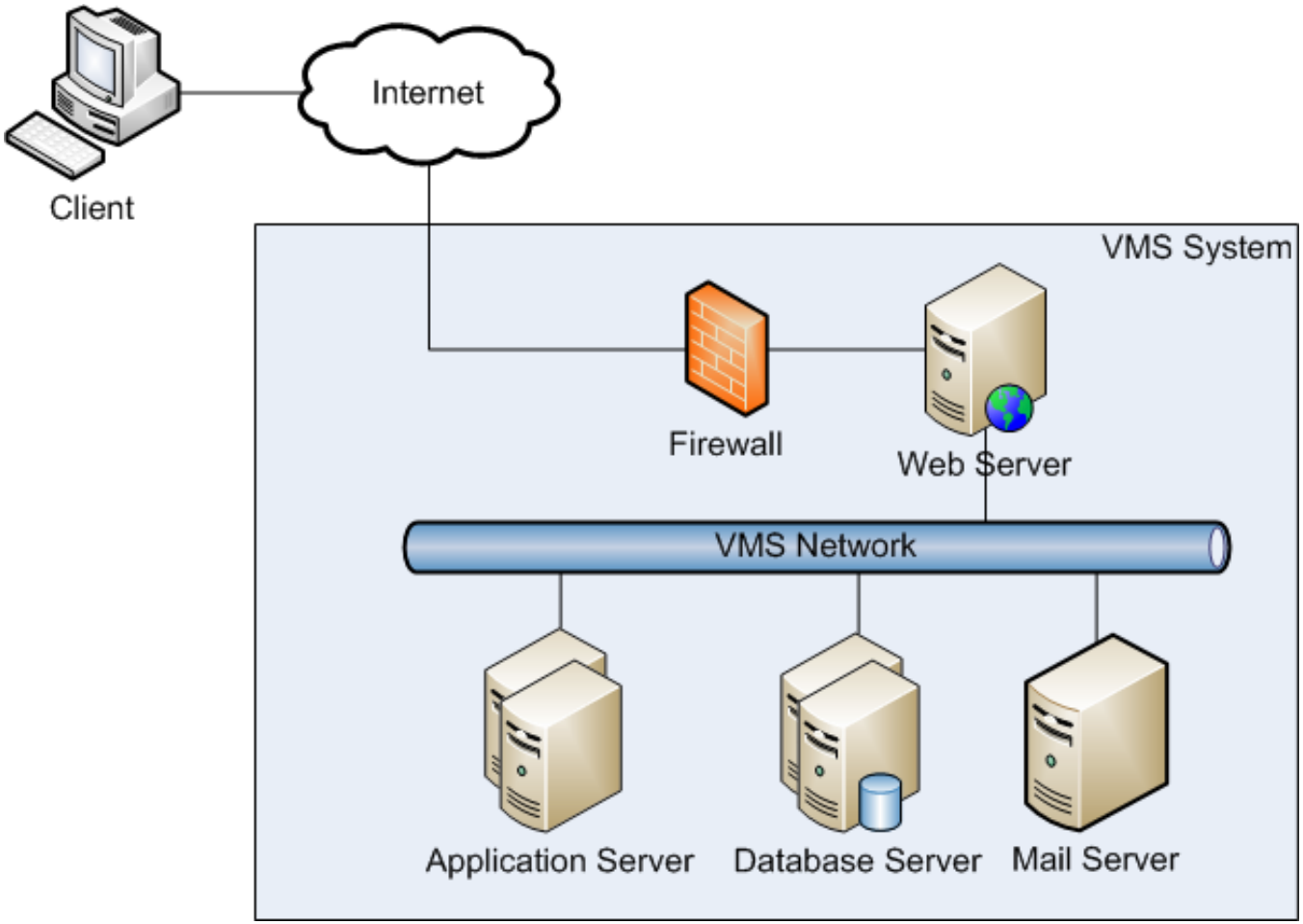
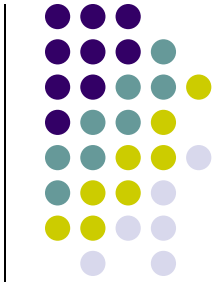
HIGH LEVEL ARCHITECTURE

High Level Architecture – Architecture Overview



High Level Architecture – Architecture Overview



Web Server

- Apache 2.2
- Apache Load Balancer (JK module)

Application Server

- Tomcat 6.0

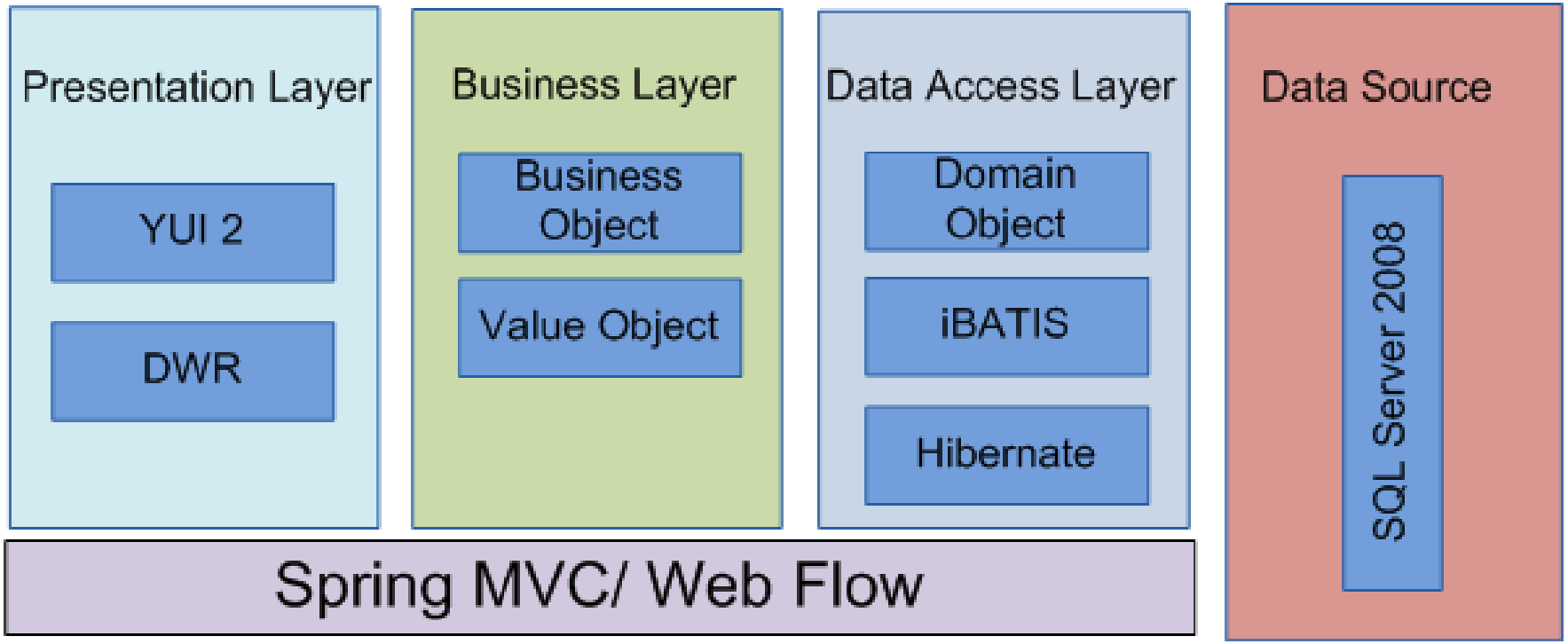
Database Server (RDBMS)

- Microsoft SQL Server 2008

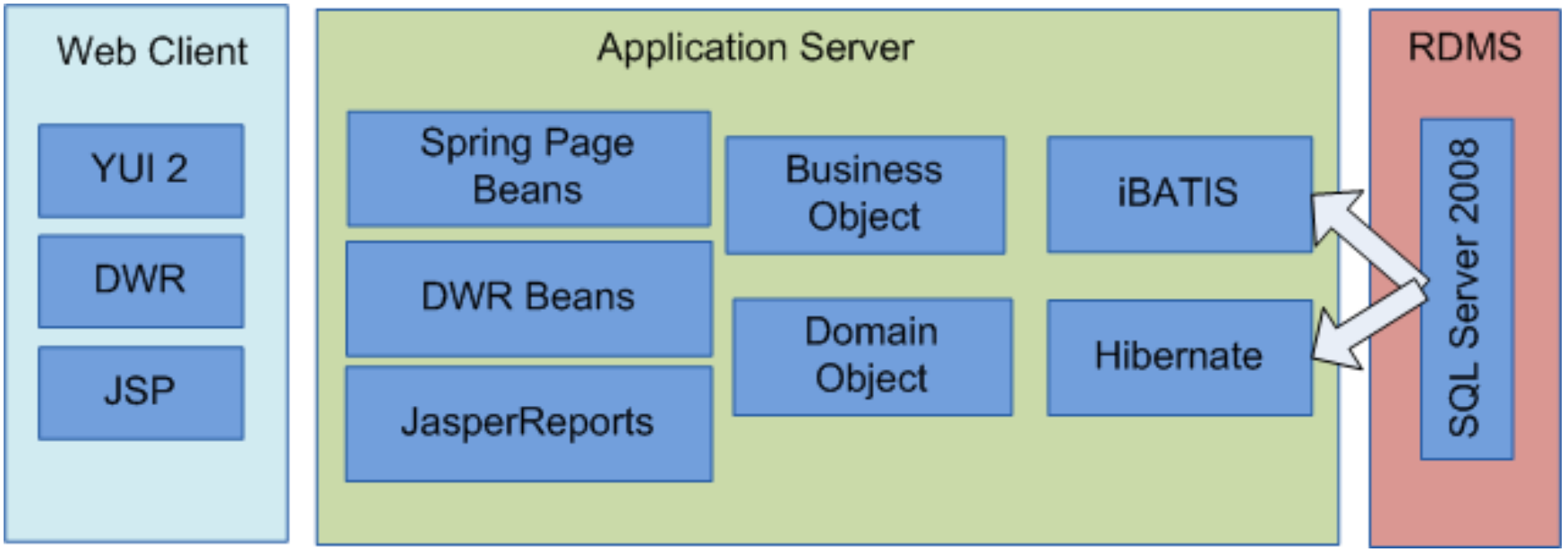
Mail Server

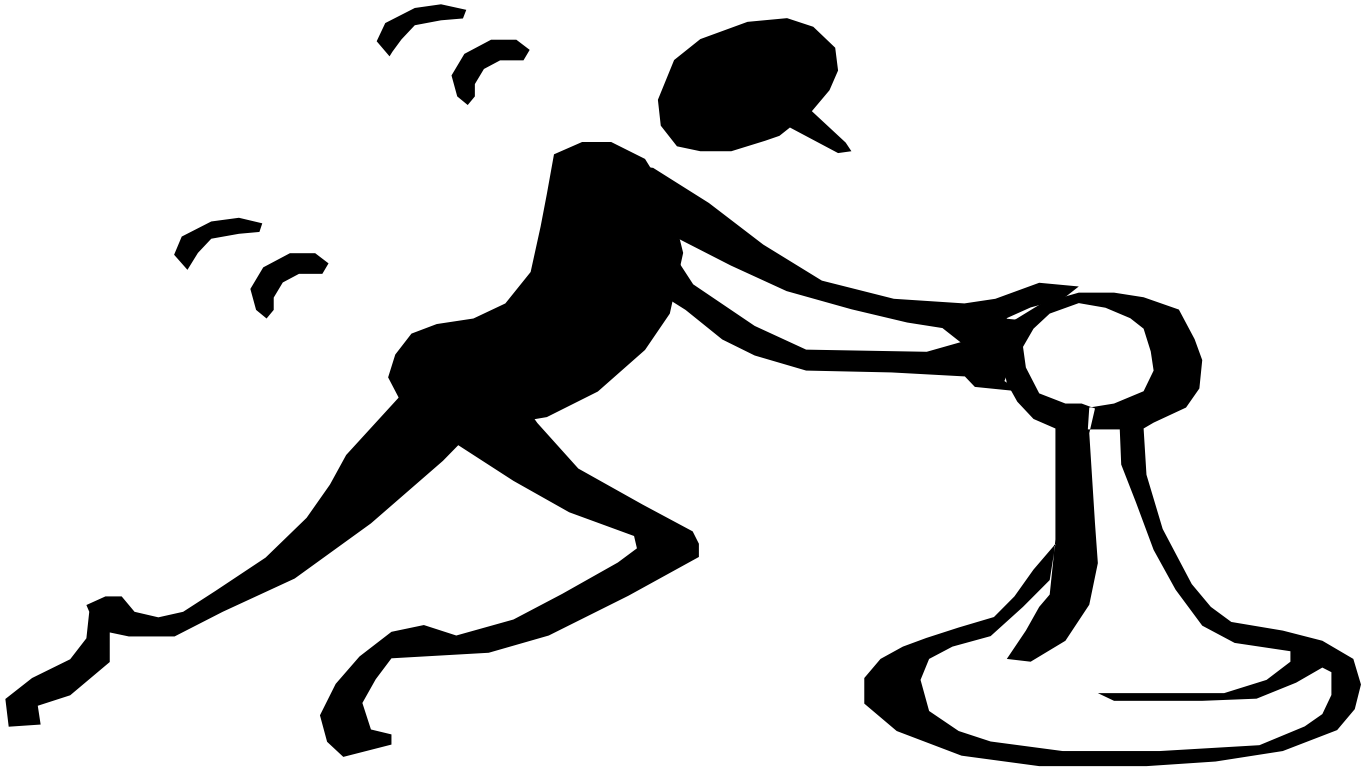
- POP Mail server (eg. Gmail)

High Level Architecture – Framework Overview



High Level Architecture – Overview of Components





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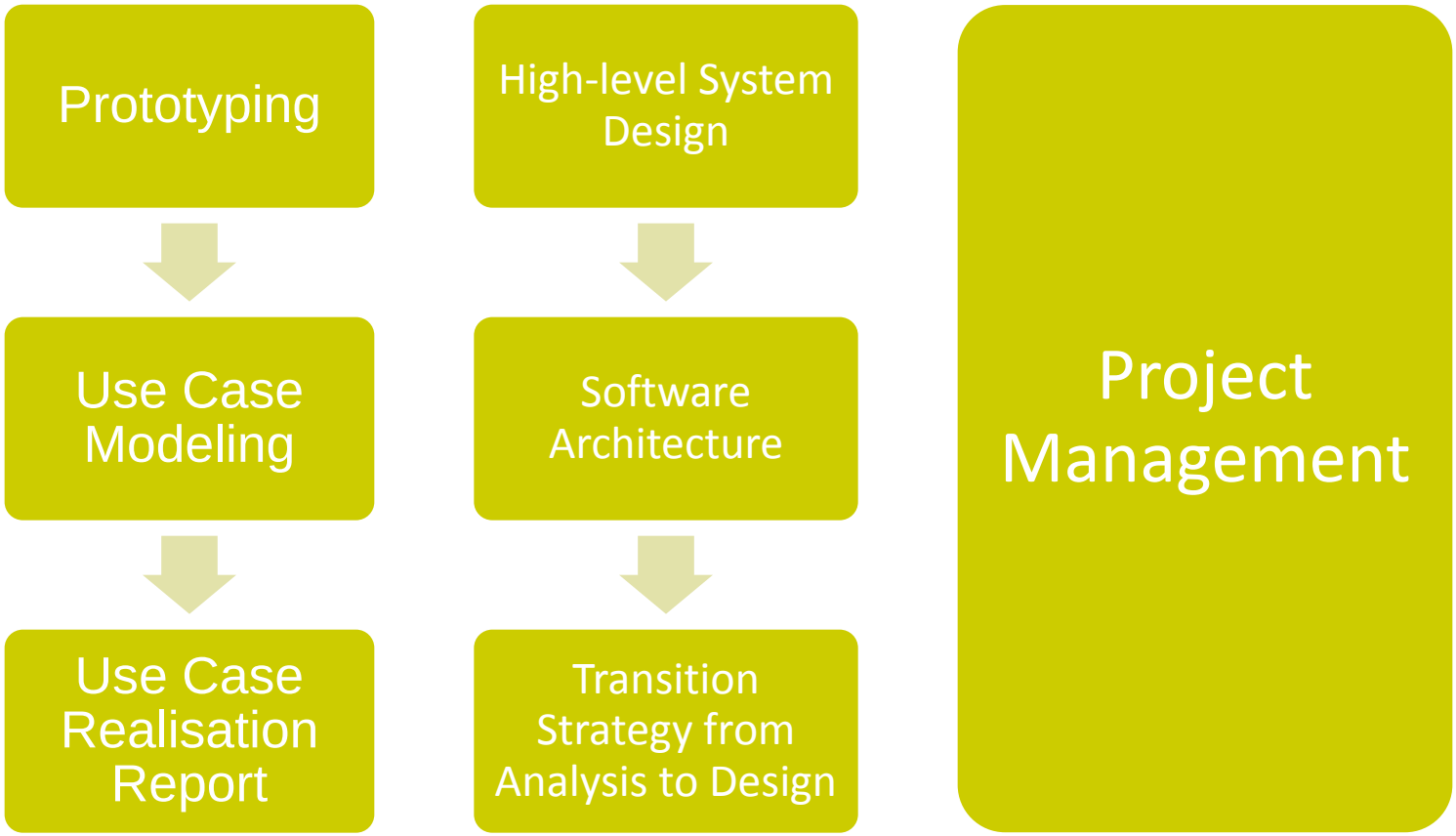
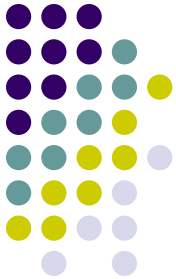
TRANSITION TO NEXT STAGE

Transition to Next Stage – Where are we now?

- Project Planning
- Analysis and Design



Transition to Next Stage – What do we plan to do?



No	Task	Description	In-Charge
1.	Prototyping	•User interface prototyping •Technical prototyping	•Feng Yan, Jifa •Zaw
2.	Use Case Modeling	•Use case model survey	•Thida, Hazel
3.	Use case realisation report	•Use case realisation report	•Thida, Hazel
4.	Software Design	•High level software architecture design document	•Zaw
5.	Transition Strategy from Analysis to Design	•Transition Strategy from Analysis to Design	•Zaw
6.	Project Management	•Transition Strategy from Analysis to Design	•Dio

Question & Answer