Software Engineering Project
310CSC302

Queen's University Belfast

Lecture 3

(1) Managing your Project

Week-by-week running of the project
Project Planning

(2) Requirements Analysis

Week-by-week project management

- You should try to have a regular time slot with your supervisor
  - supervisors have different ways of operating
  - 30 mins per week on average is OK

- The main purpose of a meeting is:
  - to review progress since the last meeting
  - to define objectives for your next week (action points)

- You should record the outcome of these on the standard Project Minute Form, and retain as a log.
  - download and personalise form available at:

http://www.cs.qub.ac.uk/~D.Crookes/CSC302/ProjectMinuteForm.doc

Project Planning

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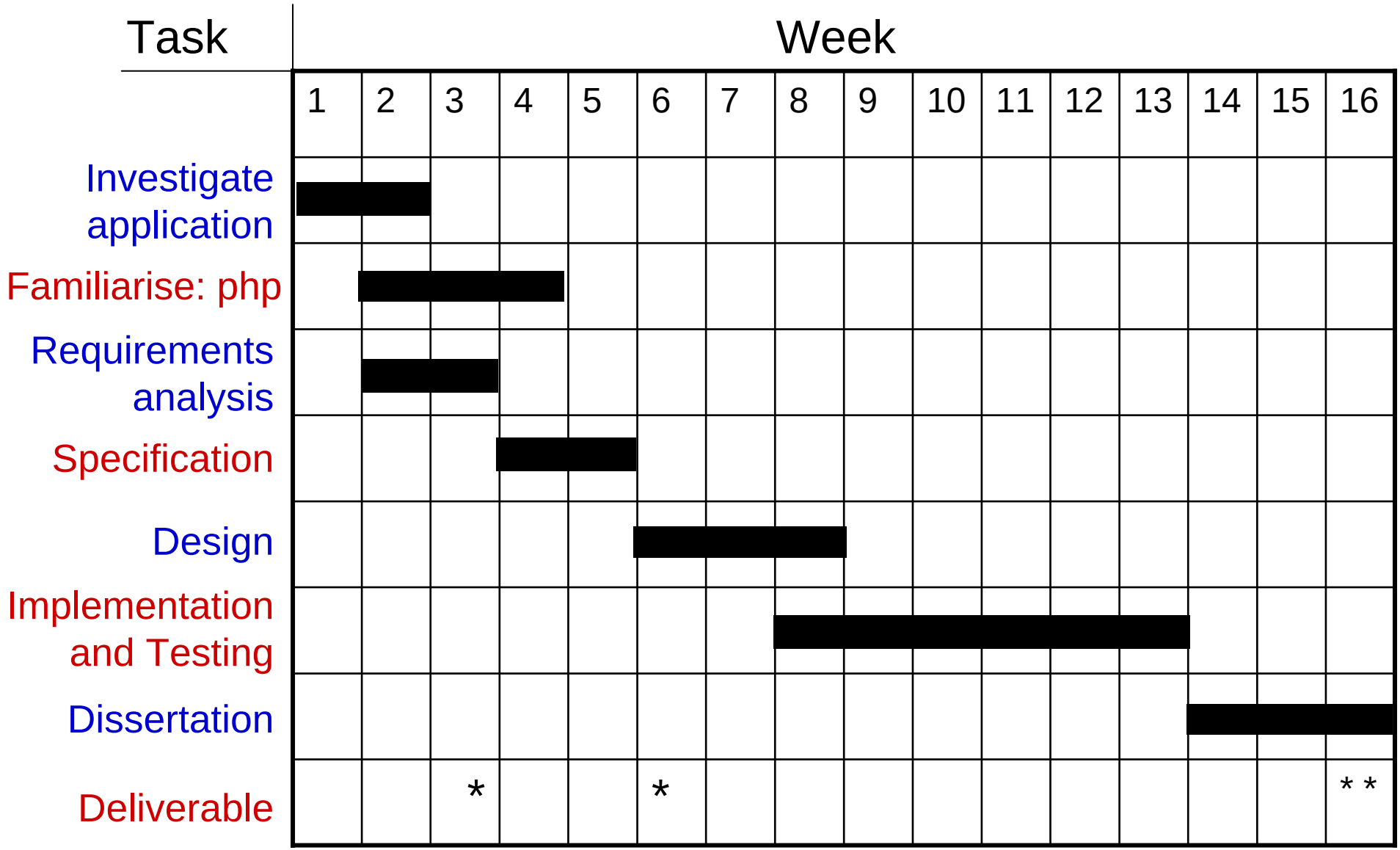
- You have until the start of May to complete everything
- The overall task must be decomposed and timetabled
- You need to identify intermediate milestones and deliverables
- Plan them using a Gantt chart, or Microsoft Project, etc.
- Your timetable should allow for Christmas, Easter, exams, etc.
- Your supervisor should discuss and approve your plan

Sample Coarse Grain Project Plan



Project Planning

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- Don't simply copy the Sample one!
  - should you develop a prototype first?
  - (Reqs / Design / Imp / Eval / Reqs+ / Spec / Design+ / Imp+)
- You should break down each task into sub-tasks, and estimate the time for each
- Review progress against your plan with your supervisor
- You may have to adjust your plan from time to time
  - allow for some slippage
- Always keep careful backups of all your work!
- Remember email etiquette – see first lecture

Requirements Analysis

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- Identify who the different users will be.
- Identify the required tasks for each user.
- Define each task, in more detail.
- What if the users do not use it properly?
  - what misuses must the system be robust against?

Requirements Analysis
Example: An eCommerce System

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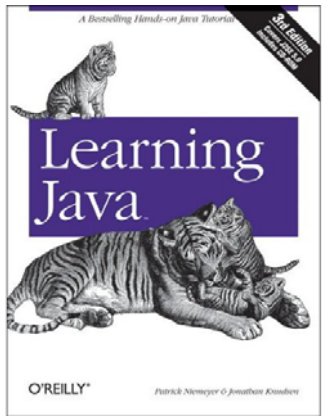
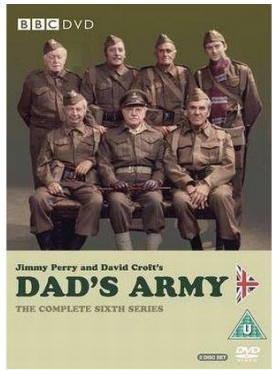
"To develop a web site which enables users to browse <*some particular kind of products*> for sale, and to make purchases.

Anyone can browse the products, but only registered customers can purchase products.

Optional: registered customers can receive email alerts for new products which match their preferences."





Requirements Analysis
Example: An eCommerce System

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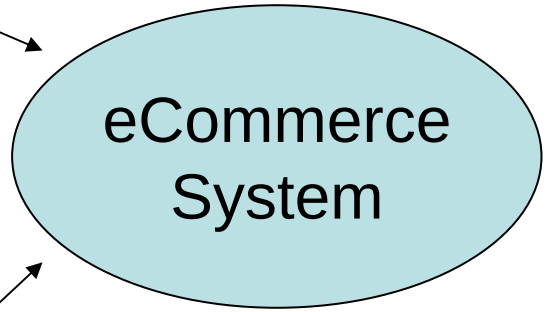
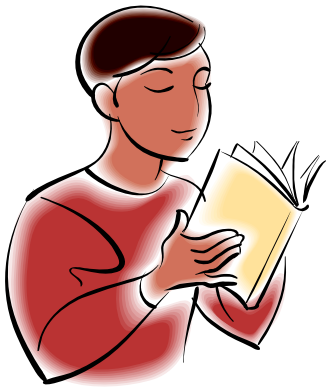
Unregistered user



Website
Manager



Registered user

Requirements Analysis
Example: eCommerce System

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Define all the tasks which each user is to be able to carry out

Unregistered User
Browse products
Register

Registered User
Log in
Browse Products
Add item to trolley
Remove item from trolley
Purchase trolley items
View account
Update preferences *
……

Manager
Add new product
View and edit product details
Delete product
View User details *
Delete User *
……

System *
Alert User to new product

Requirements Analysis
Example: An eCommerce System

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Each task should be defined

- without determining the User Interface
- define the effect on the system as relevant to the user
- define possible error conditions and behaviour

The customer may prioritise groups of tasks

- 1 (core version), 2 (hopefully), 3 (long shot)

Example: An eCommerce System (from Requirements Analysis)

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Unregistered User

Task	Register
Description	Adds a new user to the system, giving them access to all extra facilities
Inputs	User name, Email, Password, Credit card details
Effect	User has access to all facilities provided by the system to registered users. User details will be remembered and available later. User is logged on
Precondition	User must not already be registered. Details (e.g. credit card) must be valid

Requirements Analysis

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The Requirements Analysis document can be quite substantial

- An enrichment of your Problem Description
- Put Level 2 Software Engineering into practice
  - Use Case diagrams can be used
- Should slot in as one of the chapters of your dissertation

Implementation Constraints:

- Don't forget to define the (maximum) number of users which you have to support
  (for eCommerce systems, one of the most challenging problems is handling millions of users)
- State if users can be simultaneous
- State if users are distributed (on remote machines)