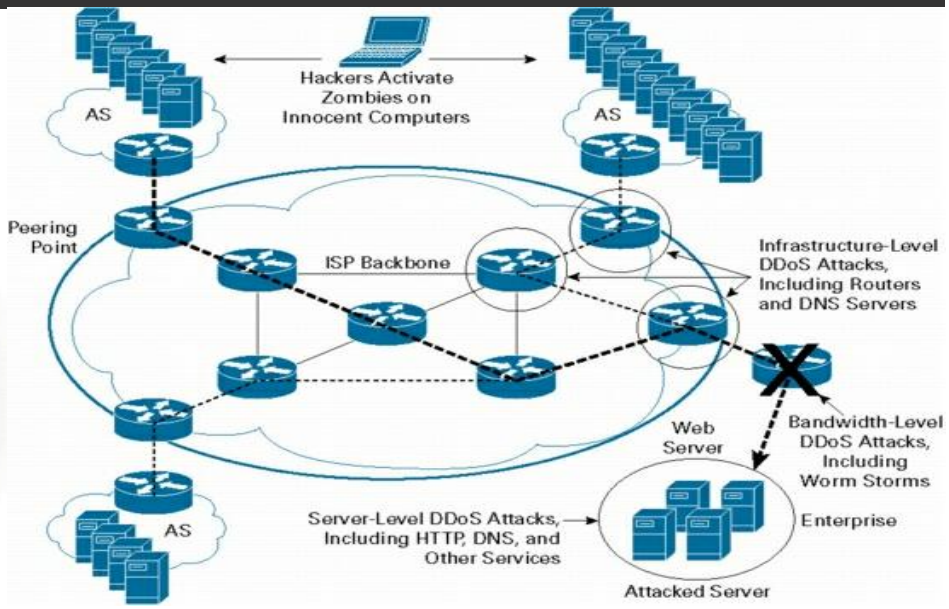
MONASH University

Information Technology

FIT2001 – Systems Development
Seminar 7.2 Design Overview

Chris Gonsalvez



Our road map:

Design Overview

- What are Information Systems?
- How do we develop them? Systems Development (SDLC) – key phases
- Traditional vs. Agile approaches to developing systems
- Some System Development roles and skills
- Understand the requirements gathering process
- Managing stakeholders
- Requirements gathering and documentation techniques
- Prototyping & Usability

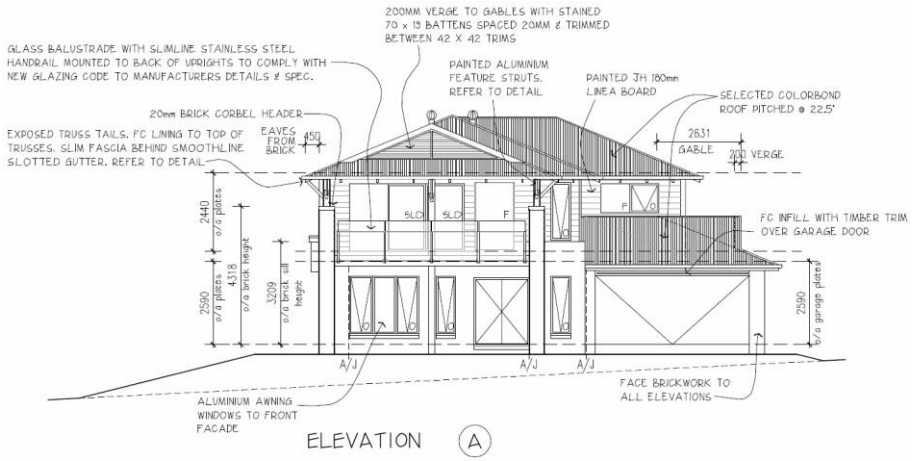
At the end of this seminar you will be able to:

- Describe the difference between systems analysis and systems design
- Understand broadly each major design activity

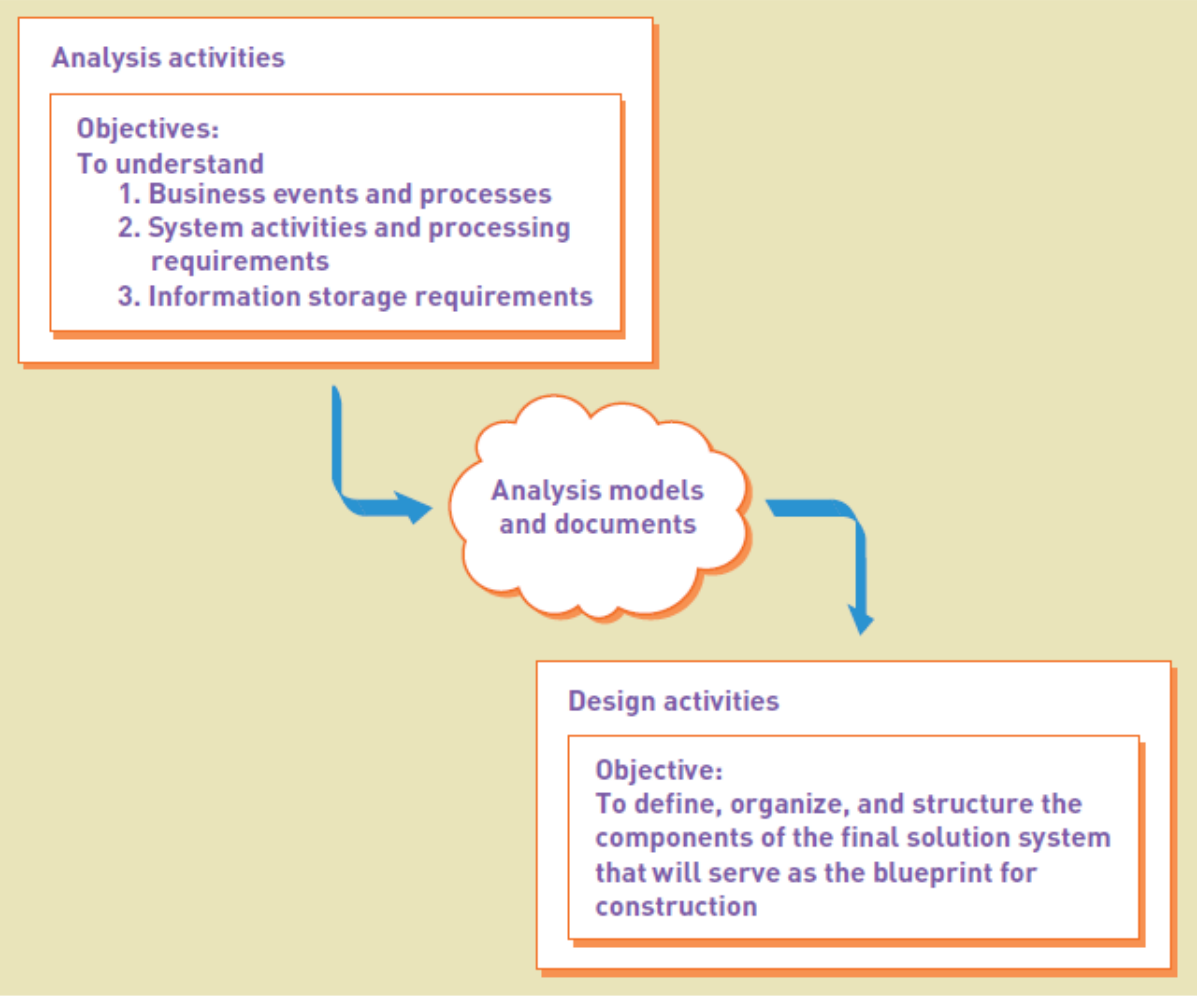
What is Design?

- The bridge from REQUIREMENTS to SOLUTION
- Focuses on:
  - HOW the system will be built
    - *Unlike Analysis which focuses on WHAT the solution needs to do*
  - What the structural components of the new system will be

…… a blueprint for development

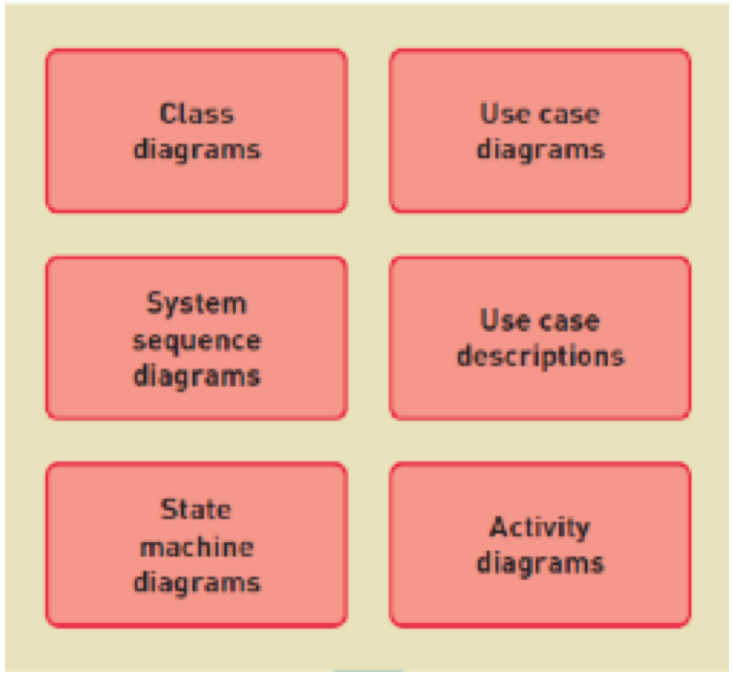


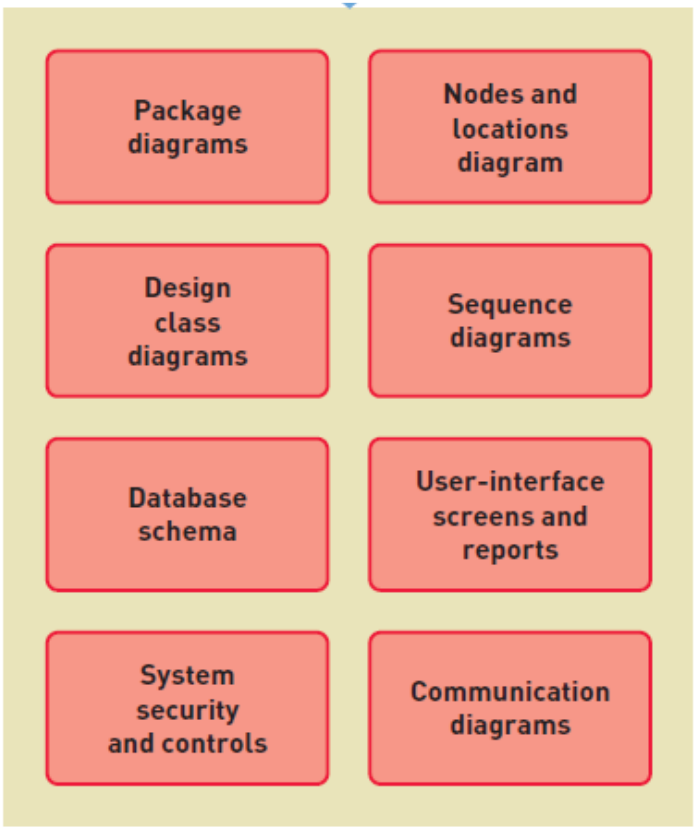
Inputs and Outputs of the design process?



Analysis Models

Design Models





Levels of Design

- Architectural Design *called General or Conceptual Design*
  - Broad design of the overall system structure
- Detailed Design
  - Low level design that includes the design of the specific program details
    - Design of each use case
    - Design of the database
    - Design of user and system interfaces
    - Design of controls and security

Design the Environment

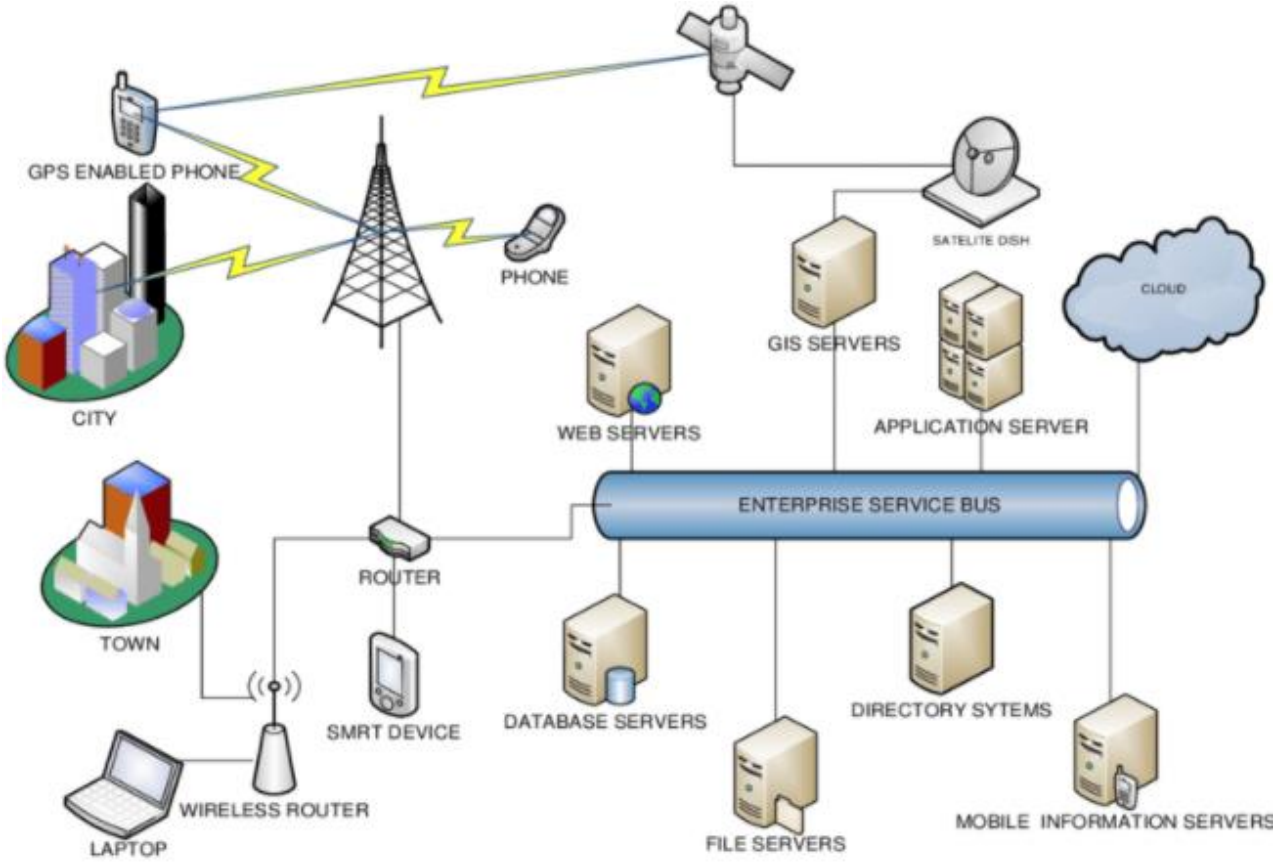
How will the new system interact with other systems and with the organisation's current computer system architecture?

- Done at an organizational level

  … individual designer will not have control

- The new system either adapts to the current environment or if needed the designer requests changes to the environment

Design the Environment



Covered in detail in FIT1047 Introduction to computer systems, networks and security

Design the application components

What are the key parts of the information system and how will they interact when the system is deployed?

- Application component – a unit of software
  - Can vary in size
  - Programming language chosen will affect what the components are
  - How will they interact with the technology to meet functionality
  - Can be built or bought
    - Purchased separately or made available by a third party provider just as AusPost for tracking

Design the User Interfaces

How will users interact with the new system?

Covered in detail in Seminar 8 and you can choose to do an elective FIT3175 – Usability

Design the Database

How will data be captured, structured and stored for use by the new system?

Covered in detail in FIT2094 or FIT3171 Databases and FIT3176 or FIT2104 for advanced database electives

Design the Soflware Classes and Methods

Detailed description of how the software works so coding can be done

Models created in analysis are extended to include software specific elements, and additional models such as sequence diagrams are created *(covered in Seminar 9)*

Design System Controls and Security

How will you mitigate the wide range of risks so that your system is safe and functions as expected

Covered in detail in Seminar 10

Workshop Preparation

Focus on Assignment 2 and working collaboratively with your team

Thanks for watching

Hope you are enjoying your break

Resources:

Prescribed text:

– Satzinger, J. W., Jackson, R.B., and Burd, S.D.(2016) Systems Analysis and Design in a Changing World, 7th Edition, Cengage Learning, Chapter 6