Software Engineering Streaming

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Outline

- Introduction
- Course Structure
- Research Topics
- Application Example from Thesis
- SE Career
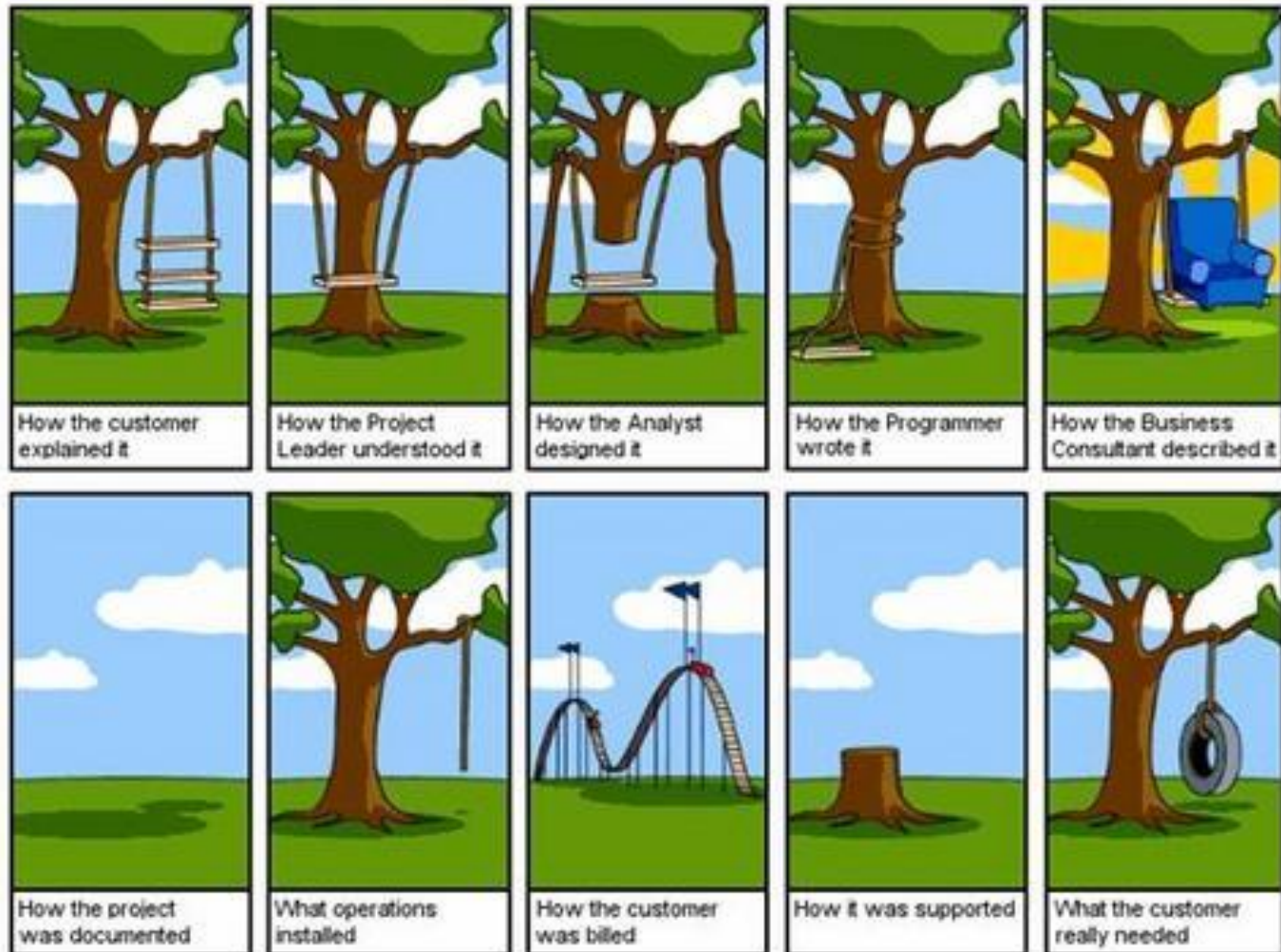
Software Engineering

Definition

- The process of **solving customers' problems** by the **systematic development** and evolution of large, **high-quality software** systems within **cost, time and other constraints**

- The systematic activities involved in the **design**, **implementation** and **testing** of software to optimize its production and support.

Nature of Software

- **Software is intangible**
  - Hard to understand development effort
- **Software is easy to reproduce**
  - Cost is in its development
- **The industry is labor-intensive**
  - Hard to automate

Why Software Engineering

People
Innovation
Excellence

Course Structure

4th Semester

Code Reengineering	4
Agile Software Engineering	2
Pattern Software Design	2/2

5th Semester

Object Oriented Analysis & Design	2/2
Framework Layer Architecture	2/2

Code Reengineering

- Refactoring Science
- Simplify your code
- Less your complexity code

People
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Agile Software Development

- Learn Scrum Methodology
- Learn Scrum practically with software tools

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Pattern Software Design

- Learn Design Pattern in Object Oriented Programming
- Course starter to learn framework architecture software

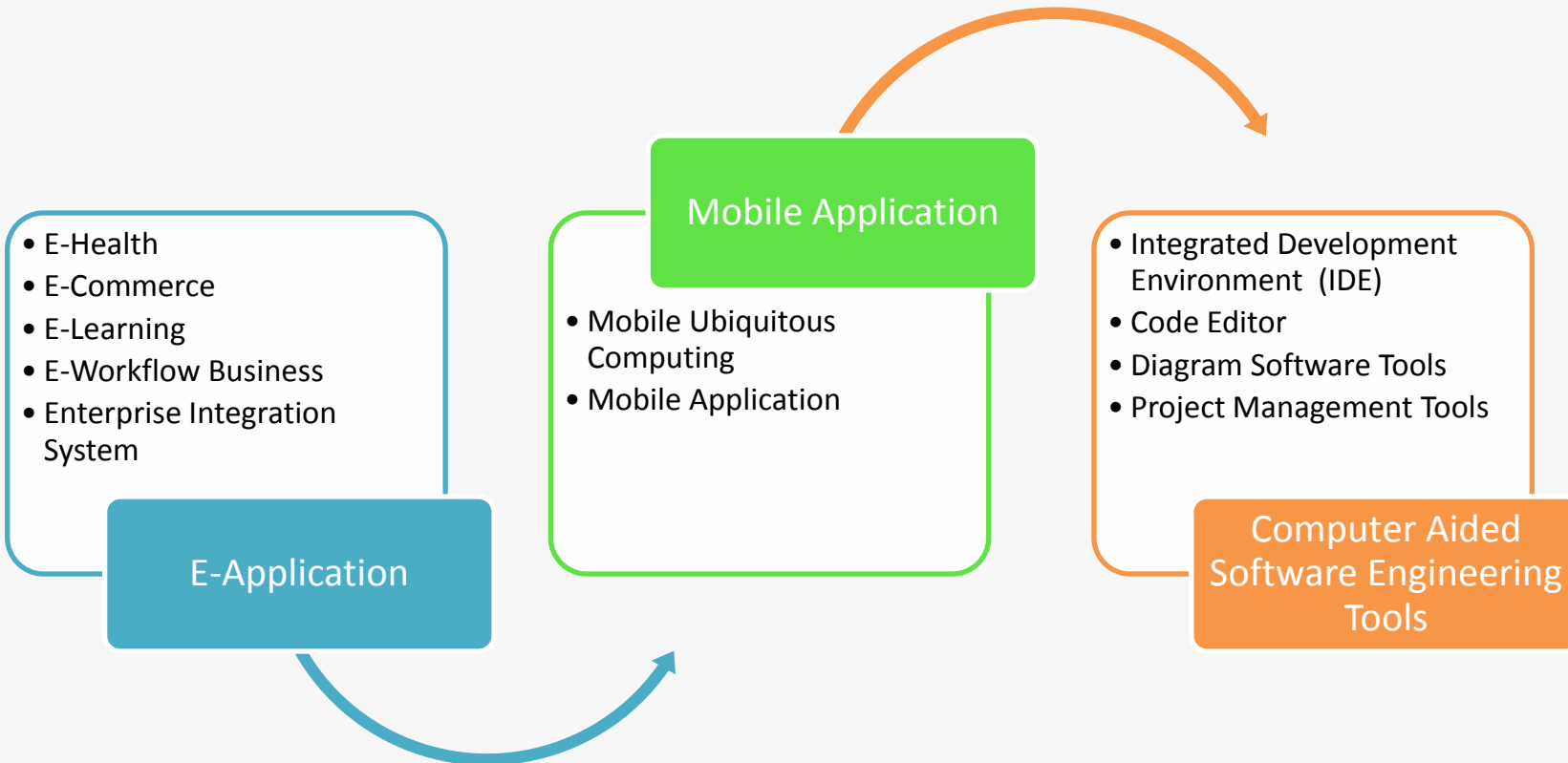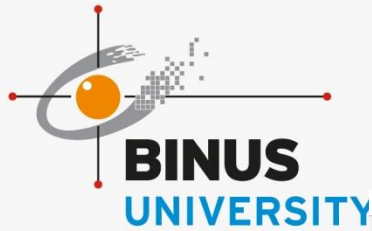# Object Oriented Analysis & Design

- Learn thinking OO Design with UML Tools
- Use UML Tools effectively

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Excellence
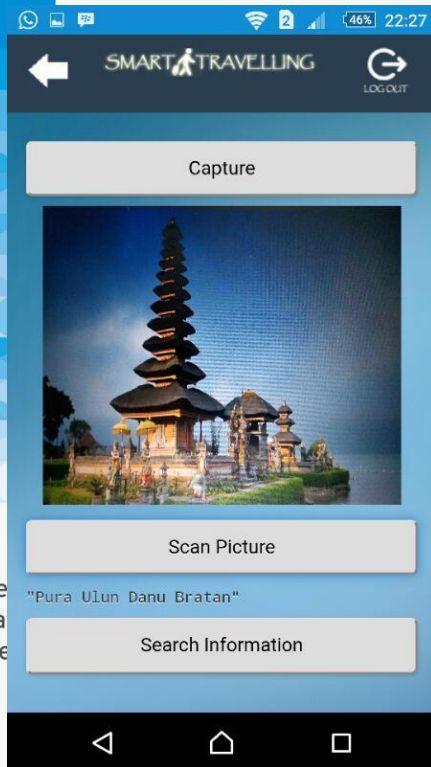
Framework Layer Architecture

- Learn how to create architecture code in Enterprise Level
- Learn from MVC to Enterprise Architecture

People
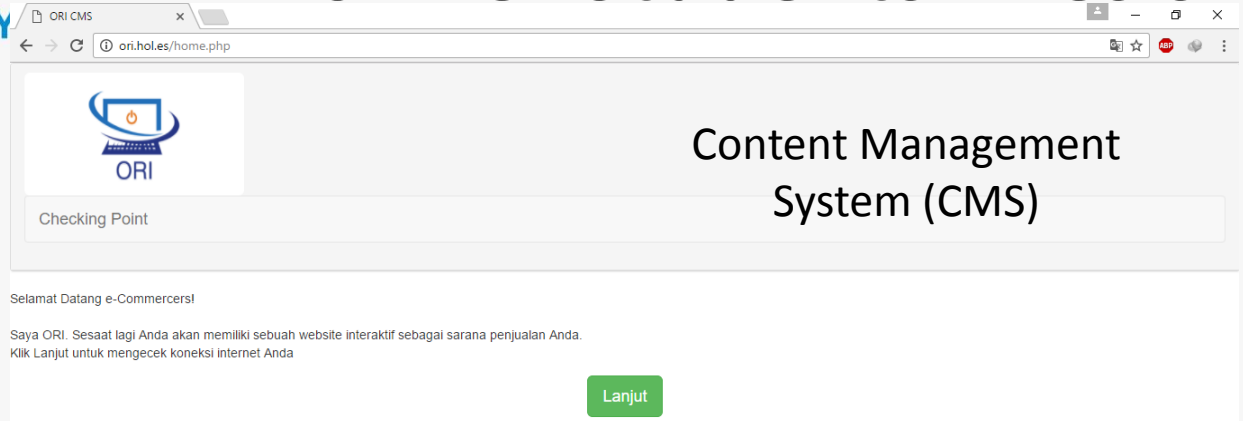Innovation
Excellence

Research Topics

E-Application
- E-Health
- E-Commerce
- E-Learning
- E-Workflow Business
- Enterprise Integration System

Mobile Application
- Mobile Ubiquitous Computing
- Mobile Application

Computer Aided Software Engineering Tools
- Integrated Development Environment (IDE)
- Code Editor
- Diagram Software Tools
- Project Management Tools

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Former Students Thesis

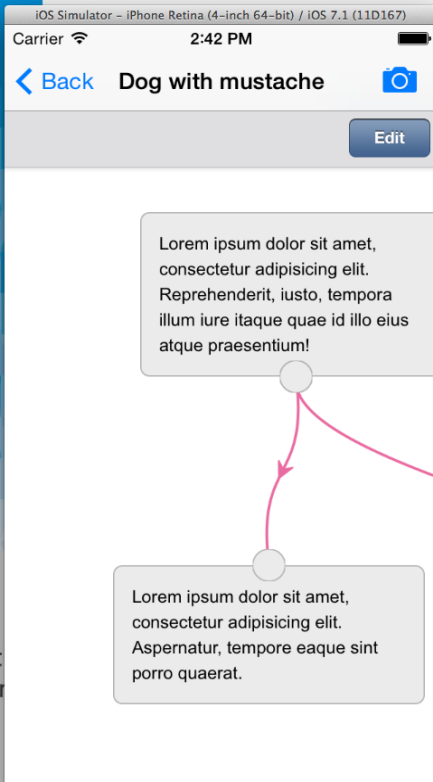Smart Traveling

Content Management System (CMS)

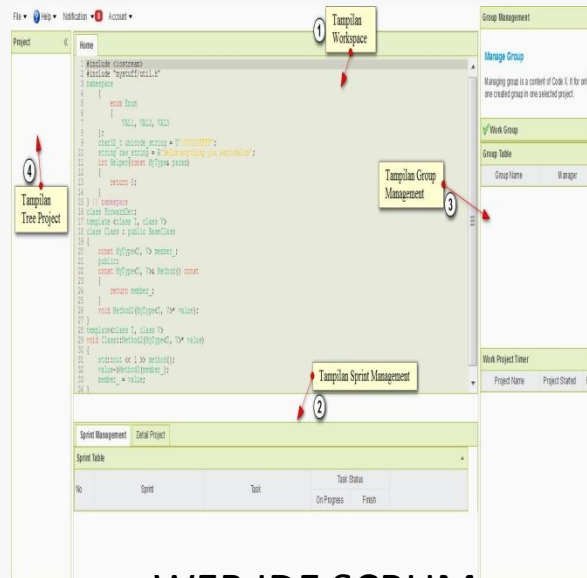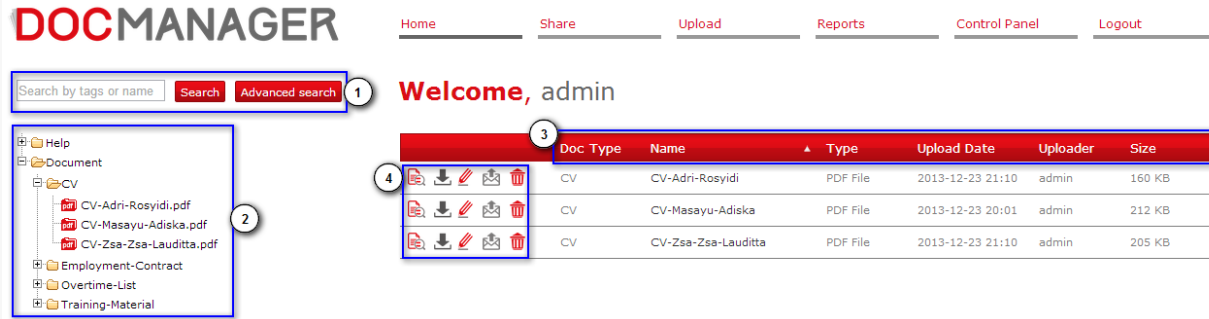System Penelusuran Publikasi

Mobile Apps – Pencarian Tempak makan

Former Students Thesis

MindKeepin – IOS
OCR MindMap

WEB IDE SCRUM
METHODOLOGY

Medical Record System

Former Students Thesis

- PENGEMBANGAN APLIKASI PERKIRAAN KEDATANGAN BUS TRANSJAKARTA MENGGUNAKAN GPS DAN WEB SERVICE

- PENGEMBANGAN APLIKASI VIRTUAL MEETING "DOVO" PADA SMARTPHONE BERBASIS ANDROID MENGGUNAKAN TEKNOLOGI VOICE OVER INTERNET PROTOCOL BERBASIS SESSION INITIATION PROTOCOL

- PENGEMBANGAN APLIKASI EVENT ORGANIZER "BOLT EVENT" DENGAN TEKNOLOGI RESTFUL PADA SMARTPHONE ANDROID

- PENGEMBANGAN APLIKASI PENGORGANISASIAN DOKUMEN "LETTERY" PADA SMARTPHONE BERBASIS ANDROID

- PENGEMBANGAN APLIKASI PENGENDALI KOMPUTER JARAK JAUH "ALTERMOTE" MENGGUNAKAN TEKNOLOGI WI-FI PADA SMARTPHONE BERBASIS ANDROID

- PENGEMBANGAN APLIKASI MOBILE BUKU HARIAN UNTUK BAYI PADA PT. DIHARDJA SOFTWARE SOLUTIONS

Former Students Thesis

- LAYANAN PERENCANAAN DAN PENJADWALAN PARIWISATA MASYARAKAT INDONESIA DENGAN KONSEP JEJARING SOSIAL BERBASIS WEB

- PENGEMBANGAN PROTOTYPING APLIKASI NOTESHARING BERBASISKAN MULTIUSER DENGAN MENGIMPLEMENTASIKAN TEKNOLOGI WEBSOCKET DI TABLET ANDROID

- PENGEMBANGAN E-ORGANIZER EVENT BERBASIS WEB DAN MOBILE DENGAN MENGGUNAKAN TEKNOLOGI NOSQL

- PENGEMBANGAN SISTEM PENGUKURAN BIAYA PEMBUATAN PIRANTI LUNAK

- SISTEM PENGAMBILAN NOMOR ANTRIAN MELALUI PENDEKATAN UBIQUITOUS COMPUTING

SE Career

Management
- Chief Technology Officer
- Chief Information Officer
- IT Consultant

System Development
- Project Manager
- Systems Analyst
- Systems Administrator
- Systems Programmer
- Applications Programmer

Web Specialist
- Web Designer
- Web Programmer
- Web Administrator

Scientist
- Lecturer / Trainer
- Researcher

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People Innovation Excellence

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