All in One Project Documentation

Dr. Rodrigo Spínola

Last class

- **Software engineering** is a systematic, disciplined, quantifiable approach designed to develop, administer, and maintain software products (IEEE Standard 610.12).

Lecture 2 - Hands on Day 1

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Last class

Technical SE Skills

Process modeling
Requirements
Software Design
Test case planning
…

Remember: managing software complexity requires more than just programming skill. Software engineering is a collaborative task!

Soft Skills

Communication
Teamwork ability
Collaboration
Empathy
Creativity
Decision making
Problem solving
Adaptability
…

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Last Class

August	Week 1	21-Aug	Course Logistics
		23-Aug	Hands on Day - All in one Project Scenario
	Week 2	26-Aug	Software Development Process
		28-Aug	Group assignments and logistics
		30-Aug	Hands on Day - Software process modeling
September	Week 3	2-Sep	University closed
		4-Sep	Intro to Agile Development
		6-Sep	Group Project - Process
	Week 4	9-Sep	Requirements Engineering - Introduction
		11-Sep	Requirements Engineering - Req Elicitation
		13-Sep	Group Project - Requirements
	Week 5	16-Sep	Hands on Day - Interviews
		18-Sep	Hands on Day - Requirements Specification
		20-Sep	Group Project - Requirements
	Week 6	23-Sep	Intro to Testing - Part 1
		25-Sep	Intro to Testing - Part 2
		27-Sep	Test case planning
October	Week 7	30-Sep	Principles of Good Unit Tests
		2-Oct	Midterm Exam #1
		4-Oct	Group Project - Testing Planning
	Week 8	7-Oct	Github
		9-Oct	Github
		11-Oct	Group Project - Github
	Week 9	14-Oct	Software Design; Software Architecture
		16-Oct	Group Project - Testing Planning / New Assignments
		18-Oct	Reading day, no classes held
	Week 10	21-Oct	Software Modeling: UML
		23-Oct	Use Case Diagram - Theory and Practice
		25-Oct	Group Project - Software design

November	Week 11	28-Oct	Class Diagram - Theory and Practice
		30-Oct	Class Diagram - Theory and Practice
		1-Nov	Group Project - Software Design - Srpint 1
	Week 12	4-Nov	SOLID Design Principles
		6-Nov	Good OO Design Practices and the Observer Design Pattern
		8-Nov	Group Project - Coding
	Week 13	11-Nov	Software Maintenance and Technical Debt
		13-Nov	TBD
		15-Nov	Group Project - Sprint 2
	Week 14	18-Nov	AI applied to code review
		20-Nov	AI applied to software refactoring
		22-Nov	AI applied to coding
December	Week 15	25-Nov	Fall break
		27-Nov	Fall break
		29-Nov	Fall break
	Week 16	2-Dec	AI applied to requirements definition
		4-Dec	AI applied to testing planning - Sprint 3
		6-Dec	AI applied to software design
	Week 17	9-Dec	Last day of classes - Monroe Park Campus
	Week 18	18-Dec	
		20-Dec	

Hands on day
Group project day
No class
Midterm exam
Research corner

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Agenda

- All you need today is:
  - Capacity of working in groups
  - Work, work, work
  - Fast, fast, fast
  - and, somehow, creativity…

Task of the Day

Organize yourselves in groups of 5

Consider a **car rental system**

A car rental system is a software solution designed to manage the operations of a car rental company. It handles various aspects of the rental process, from booking vehicles to managing inventory, payments, and customer information.

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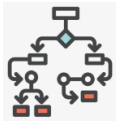
Task of the Day



Specify the **process** (sequence of activities you would follow) to develop the project.

Specify the **requirements** of the software.

Specify **test cases** to assure the quality of the requirements you defined.

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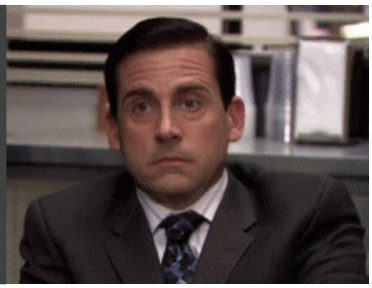
Deliverable

- At the end of the class, package the result of your work into a single PDF file and send it to spinolaro@vcu.edu

Don't worry, this will not be part of your grade!



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