Software Engineering

WEEK 01 LECTURE 01

- How shall you start development if I ask you to build a
  - Goal Management System ?
  - Exam Management System
  - LMS ?

A STORY OF FIRST SOFTWARE DEVELOPMENT.

- Client: I want you to build the software for my company
- PM: what are your requirements.
- Client: here is the list.
- PM: start developing the requirements.
- Client: that what's I did not

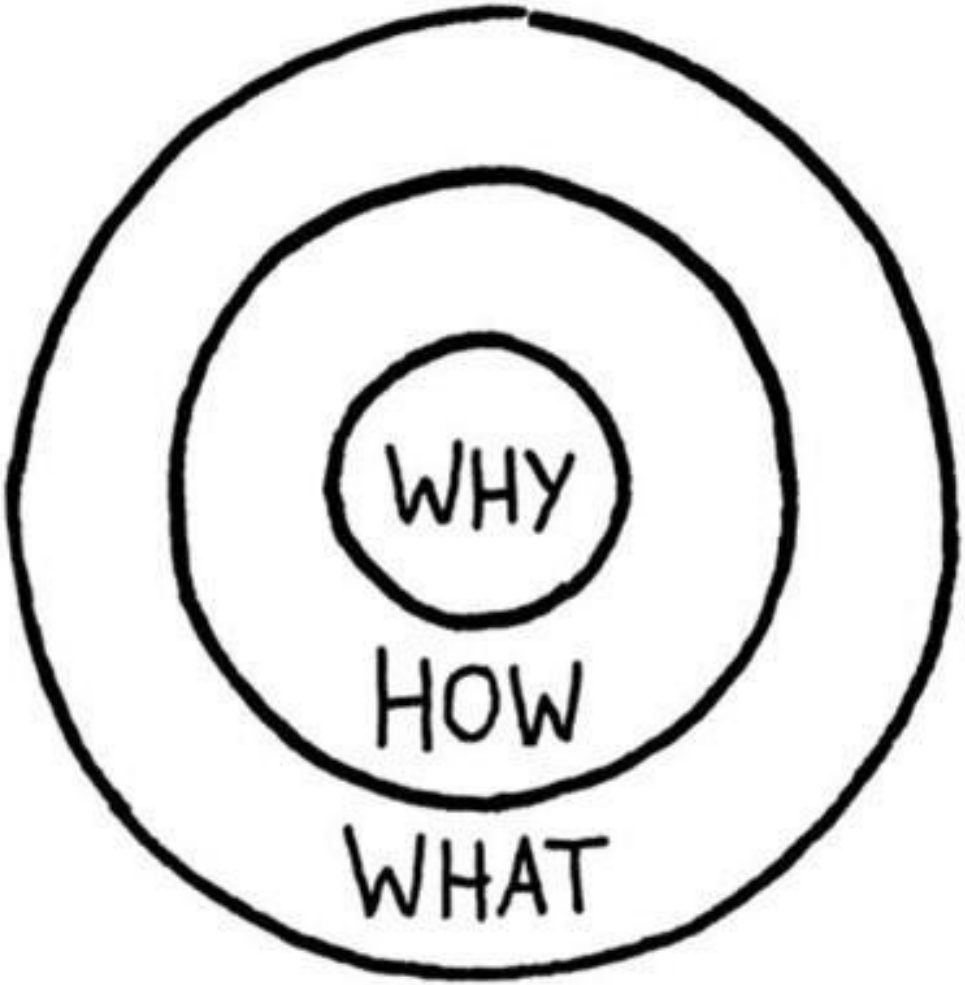
GOLDEN CIRCLE

HTTPS://WWW.YOUTUBE.COM/WATCH?V=L5TW0PGCYN

0_SIMON SINEK

- You want to be successful in life start thinking every goal and task in terms of Golden Circle.

GOLDEN CIRCLE



Why = The Purpose
What is your cause? What do you believe?

Apple: We believe in challienging the status quo and doing this differently

How = The Process
Specific actions taken to realize the Why.

Apple: Our products are beautifully designed and easy to use

What = The Result
What do you do? The result of Why. Proof.

Apple: We make computers

- After design, development and deployment of more than100 applications/ softwares I have following Road Map

CLIENT REQUIRMENTS

- Biggest Challenge what customer wants ?

DEVELOPER UNDERSTANDING

- How to communicate developer what customer wants

WHAT IS BEST SOFTWARE DESIGN

- What is best way to write the code ?
- One Developer write everything in the main method other make classes.
- One make 2 classes and other make
  10 classes.

MANAGING SOFTWARE DEVELOPMENT

- Task Divisionand Running the project in parallel.
- How different developers work on same code file ?
- How to maintain history of the code
  and changes so bug can be tracked

COMPLETING THE PROJECT ON TIME

- Work Division
- Communicating with Client
- Iterative vs waterfall

VERIFICATION AND VALIDATION

- Test what we have developed is the requirement of the customers (have we developed right thing)
- Test what we have developed is working fine. (have we developed rightly).

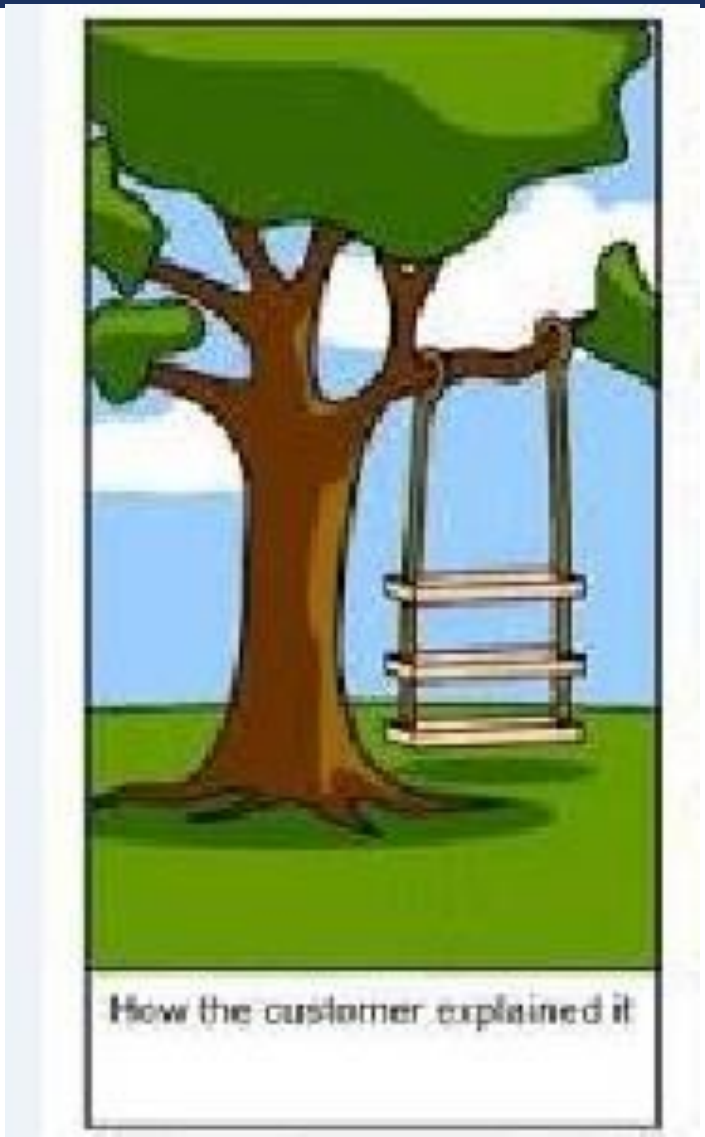
DEPLOYMENT

- Deploying the Project
- End user Training or onboarding

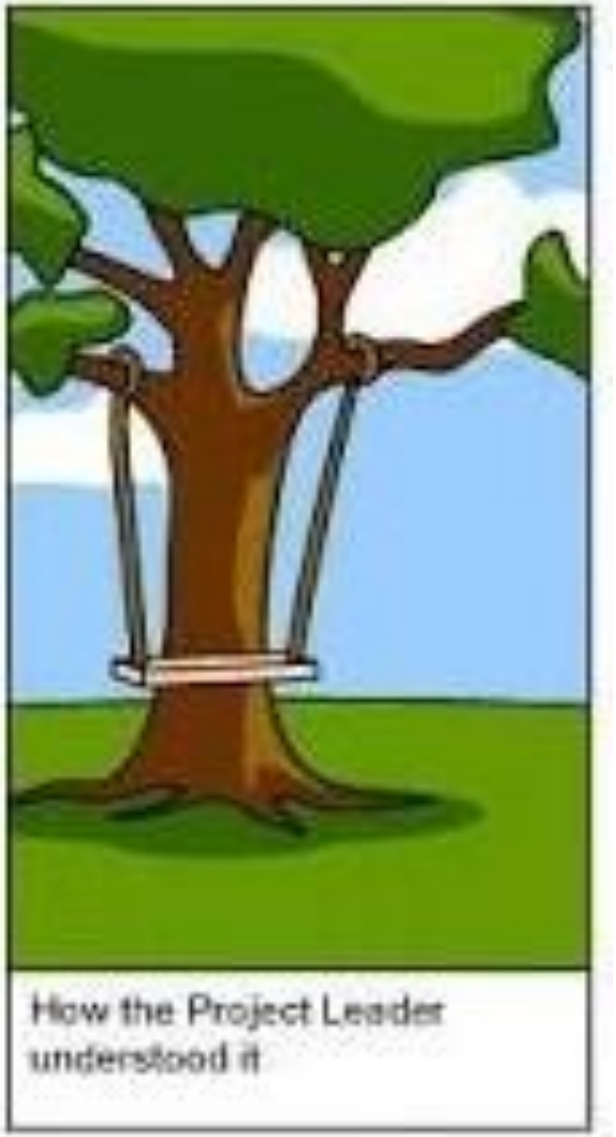
SUMMARY

- Understanding the client.
- Writing Requirement So the developer can understand
- Software Design
- Software Development
- Software Testing
- Software Deployment

BAD REQUIREMENT: HOW THE CUSTOMER EXPLAINS

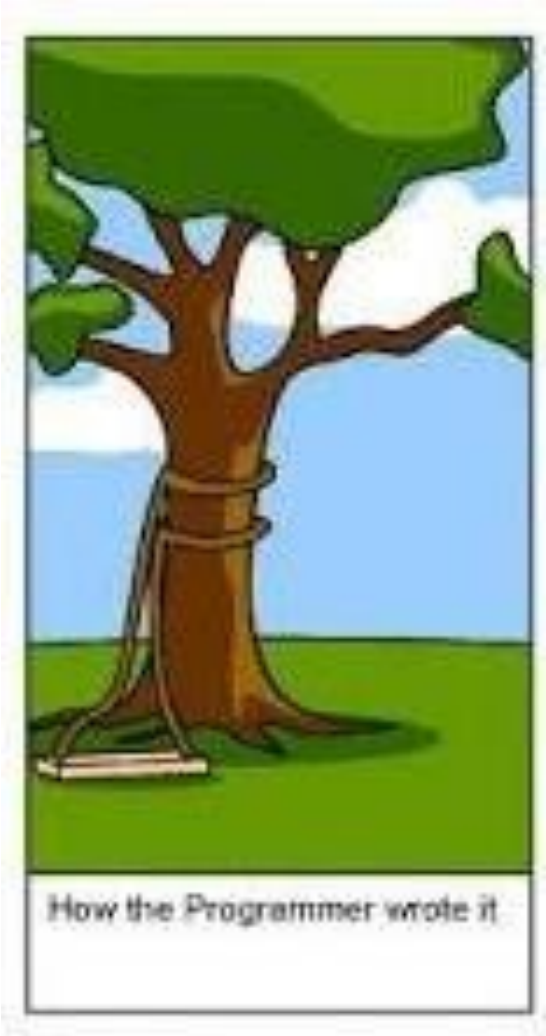


BAD UNDERSTANDING:

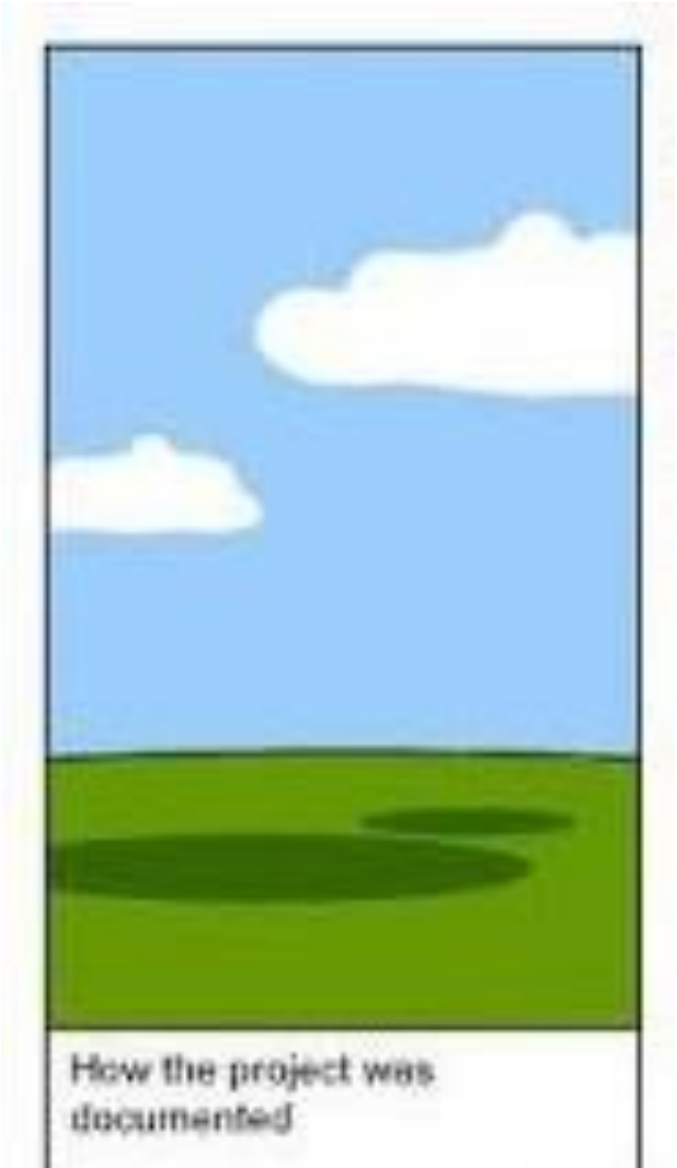


BADE DESIGN: HOW DESIGNER DESIGN IT

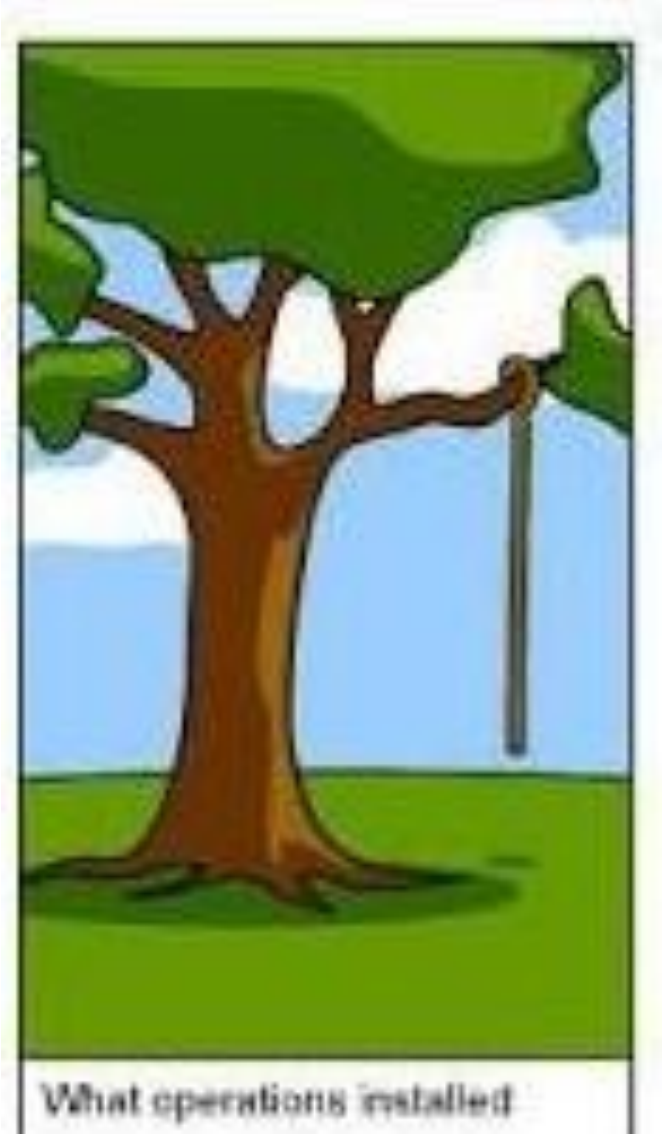
BAD PROGRAMMING: WHAT PROGRAMMER DEVELOP



BAD DOCUMENTATION:WHAT WAS DOCUMENTS



BAD DEPLOYMENT:



BAD VALUES: WHAT WAS BILLED

BAD REQUIREMENT:WHAT CUSTOMER REALLY NEEDED

WHAT SHALL YOU LEARN IN THIS CLASS

WHAT YOU LEARN IN THIS CLASS

- Understand your Client.
- Communicate with Developers
- Make a Better Software Design.
- Develop a Software according to
  the Designed.
- Works in Teams

COURSE MAP

Understanding	Design	Planning	Development	Testin
• Requirement Writing • Use Case Writing • Wire framing • Story Boarding • Test Case Writing	• Static Design • Dynamic Design • Design Patterns • Strong software design vs Weak software design • Design Principles	• Project Planning • Agile Methodology • Sprint execution • Team work	• Visual Programming • Layer Architecture • Implementation of Design Patterns • Two Projects	• Writing test cases • Testing the systems

PROJECTS

- Select Project.
- Dream Software with Small functionality.
- You need to submit your project statement in next class.