

# Software Engineering (COMP433)

## Software Processes (Software Process Model)

*Location: ;*

*Time:*

*s1: Monday & Wednesday: 11:25-12:40 [Masri204/ALSADIK406]*

*s3: Tuesday & Thursday: 12:50-14:05 [PNH403]*

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<http://>

# What is a Process ... ?

When we provide a service or create a product we always follow a sequence of steps to accomplish a set of tasks

You do not usually

Paint the wall before the wiring for a house is installed !

We can think of a series of activities as a **process**

Any process has the following characteristics

It prescribes all of the **major activities**

It uses resources and produces **intermediate and final products**

It may include sub-processes and **has entry and exit criteria**

The activities are **organized in a sequence**

Constrains or control may apply to activities  
(budget control, availability of resources )



# Software Processes

When the process involves the building of some product we refer to the process as a life cycle

Software development process – software life cycle

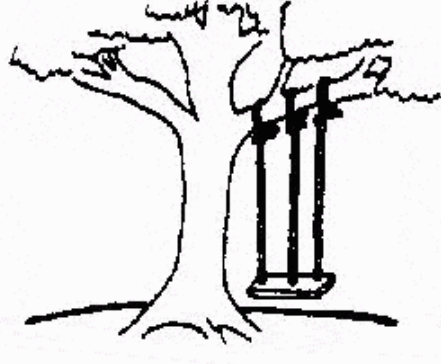
**Coherent sets of activities for**  
Specifying,  
Developing (Designing,  
Implementing) and  
Validating (Testing) software  
systems



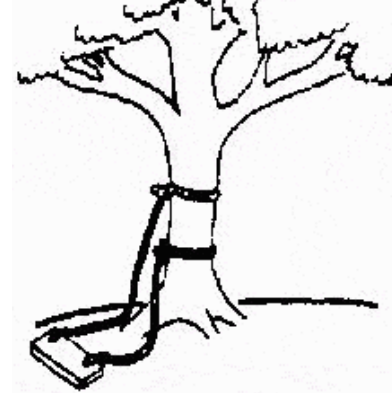
# Major problems in software developments ...



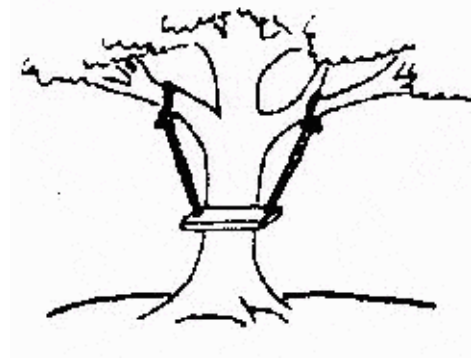
**The requirements specification was defined like this**



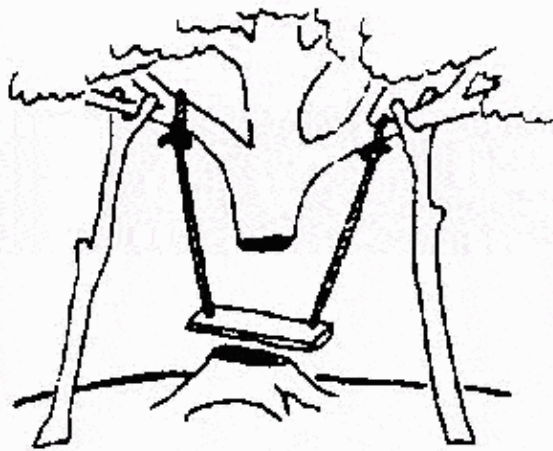
**This is how the developer understood**



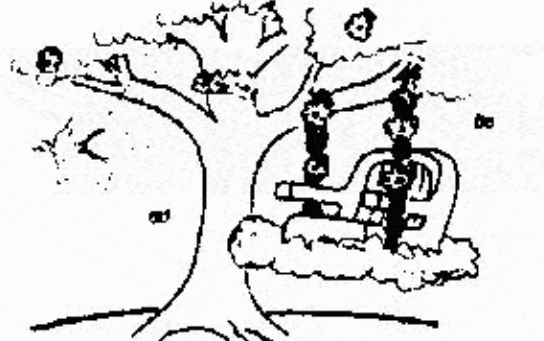
**This is how the problem was solved before.**



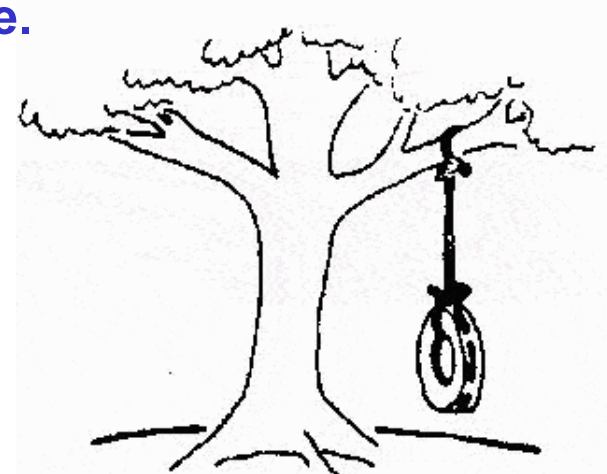
**This is how the problem is solved now**



**This is the program after debugging**



**This is how the program is described by marketing department**



**This, in fact, is what the customer wanted ..**



# The Software Process

- **A structured set of activities required to develop a software system**
  - Specification
  - Development/Design
  - Validation
  - Evolution
- **A software process model is an abstract representation of a process**
  - It presents a description of a process from some particular perspective

