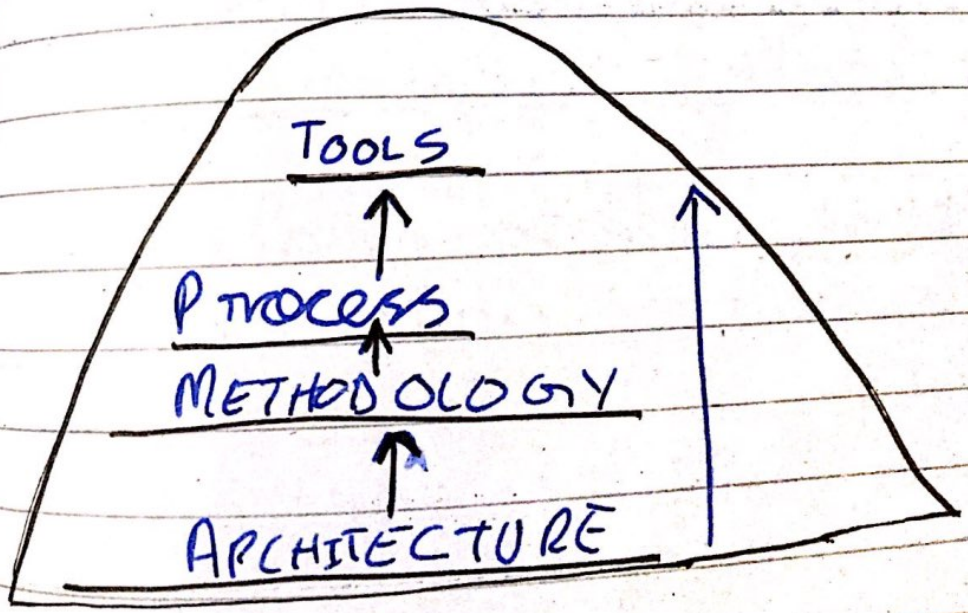
SOFTWARE DEVELOPMENT
C/C++
CSSE-415

SCIENCE	ENGINEERING
Mathematics logics Algorithms Design ... etc	- Construct - Build - Make/Made - Assemble - Manufacture - Develops - Establish.

STEP BY STEP APPROACH



* **Architecture** is the planning stage of a development process

* **Methodology** is the method of doing work, everyone has different methodology

* **Process** is the step by step way of ~~doing~~ development process. Two basic approaches
  (i) Waterfall method
  (ii) Spiral method.

* Waterfall method is ~~used~~ used when each activity is well defined and low chance of mistake

* Spiral method/model used when time duration is long.

SOFTWARE DEVELOPMENT

⊛ What is a Software?

⊛ Software is a product & a service. It is a vehicle to deliver the product. Software is a rental technology and every rental technology has 2 things
(i) Licensing
(ii) Agreement.

⊛ MOBILE APP:

(1) Network intensiveness
(2) Concurrency (simultaneous running of multiple apps)
(3) Unpredictable load
(4) performance
(5) availability
(6) security.
(7) Asthetic.

•) STAGES IN SOFTWARE DEVELOPME

① REQUIREMENT
② PLANNING
③ IMPLEMENTATION.
④ TESTING
⑤ DEVELOPMENT
⑥ SUPPORT.

① REQUIREMENTS:
Requirements of user

② PLANNING:
Plan your approach towards development

③ IMPLEMENT
coding of software

④ TESTING;
Testing of the software.

SOFTWARE DEVECOPMENT

* AFTER PURCHASING SOFTWARE WE GET:
(i) AGGREEMENT (ii) SETUP FILE
(iii) SLK (SOFTWARE LICENSING KEY)

CH#6 SYSTEM ENGINEERING

SYSTEM:
It goes like

INPUT → MIYER RECTIFICATION
↓
PROCESS ←
↓
OPERATOR (USER)
↓
ENVIRONMENT
↓
OUTPUT
↓
FEEDBACK.

* **DEFINITION:**
Designing, implementing, deploying & operating the system which include hardware, software, people & environment

Input is the sensor

Output is the execution.

There are 3 types of system:
(i) Automated
(ii) Semi-Automated
(iii) MANUAL

~~System~~ is

Process is composed of three major things:
(i) Software code / software programs
(ii) Formulation & policies (BUSINESS)
(iii) Chamber.

System is a purposeful & meaningful collection of inter-related, interconnected components working together towards a common objective.

System may include software, mechanical, electrical or digital hardware.

* Some of the components are active components and some are passive.

active → driving components
passive → deriving "

* ~~EMERGENT PROPERTIES~~
* EMERGENT PROPERTIES:
* Defining
* Redefining
* Refining
* Continue.

(1) This is called (Business process ENGINEERING / RE ENGINEERING)

(2) Designing of the system.
(TECHNICAL PROPERTY)

* Dynamics of the system:
- Hardware Reliability
- Software "
- Operator "

SATISFACTION

- Main thing is quality of the system.
- Modeling is a phase of designing.
- The design should be reliable and as per Standard Operating Procedures (SOP)

SHALL NOT PROPERTY:

- Leave the system or don't be a part of a system that may be a threat to human life.