

Page No.:	1
Date:	1/1/2023

Unit-02

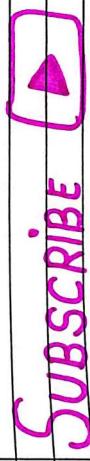
1. Software Process [AKTU-2020-21]
2. Process Models
3. Choice of Process Model [AKTU-2020-21, 22-23]
4. Rapid Application development [AKTU-2020-21, 22-23]
5. Agile method
6. Dynamic System Development Method
7. Extreme Programming interactive process

8. Basics of Software estimation

9. COSMIC Full Function Points [AKTU-2022-23]

10. cocomo II

11. Productivity model



SUBSCRIBE

Join TELEGRAM

Software Process Model : [TRIP]

- Representation of Software process
- A Software process model is a structured approach that defines the steps and activities involved in developing and maintaining Software System

Choice of Process Model :- [TRIP]

- Project Requirements
- Project Size • Complexity
- Client
- Skills and Knowledge
- Developers & Team members

Rapid Application Development :- [TRIP]

- Quick Prototyping
- Iterative Development
- Incremental Releases
- User Involvement
- Time - Boxing
- Parallel Development
- Project can be broken down into small modules where each module can be assigned independently to separate teams
- Uses Short Period of time

Page No.:	1 / 1
Date:	1 / 1

Advantage :-

- Reduces development time
- Reusability

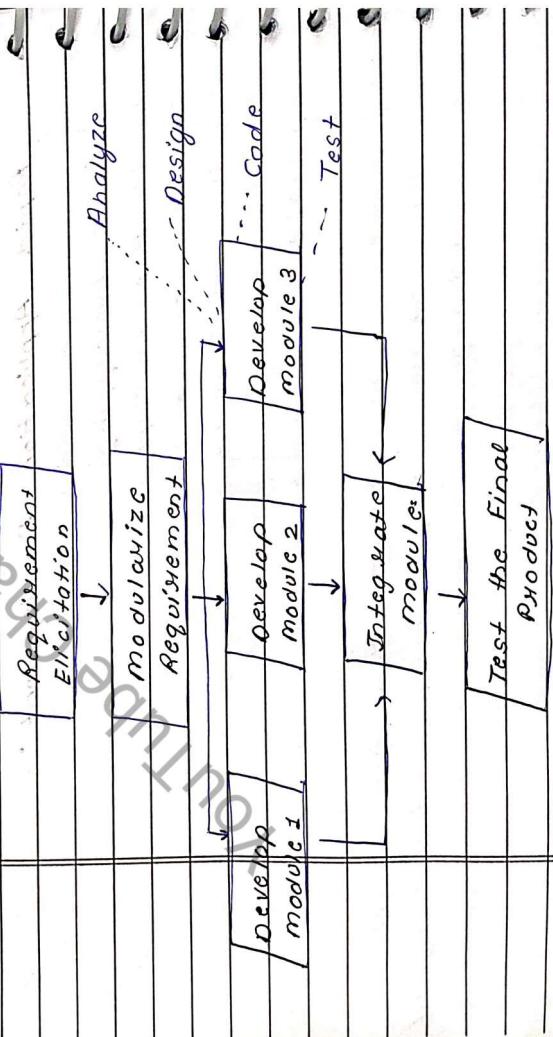
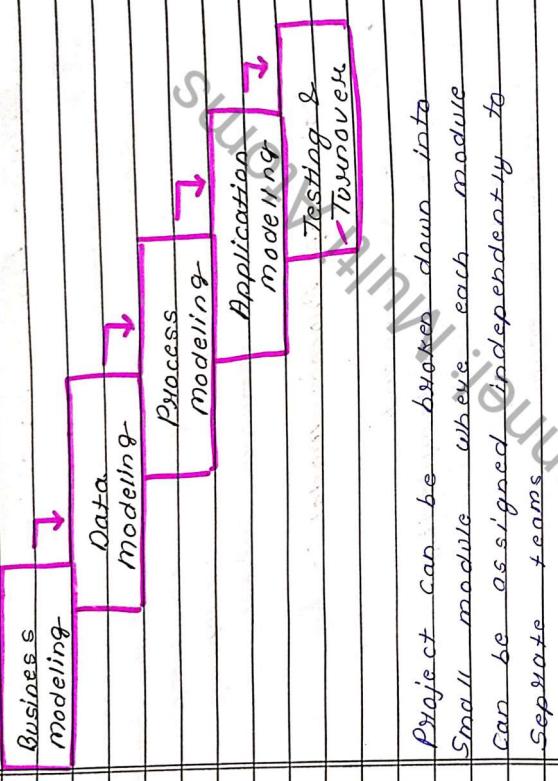
Disadvantage :-

- Not suitable for smaller project
 - High skill person required
- OSOM (Dynamic System Design Development Model)

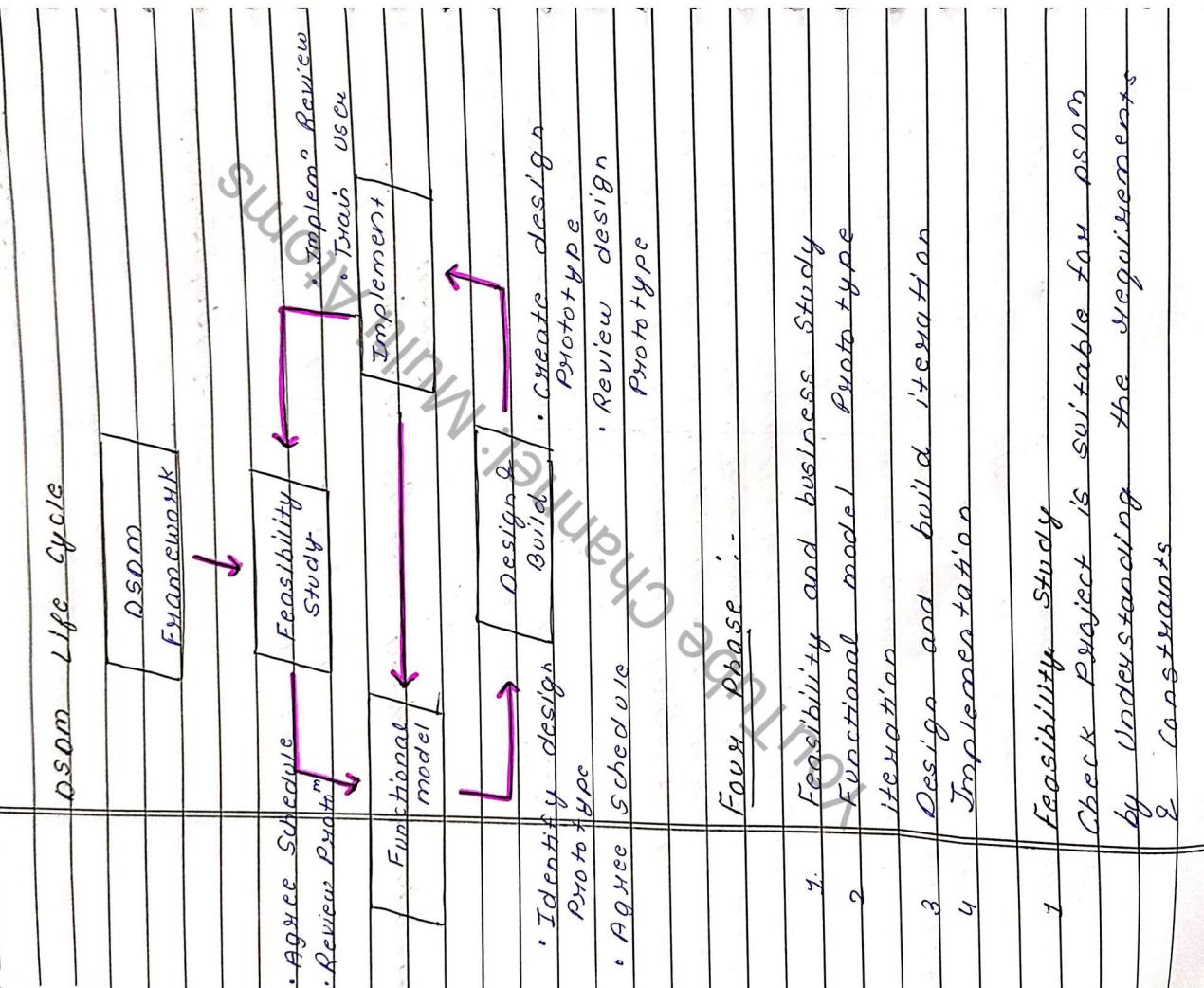
- Work on same principle of Agile development, including continuous user / customer involvement.

- OSOM is a framework based around Rapid Application development.
- It focuses on Information System projects that are characterized by tight schedules and budgets.

The method primary aim is to deliver small module where each module can be assigned independently to separate teams.



Page No.:	1
Date:	1/1



- 2 Business Study
- Define user & Functional requirements necessary for application to provide business value
 - Also identify how the application is designed & maintained is long time
- 3 Functional Model Iteration
- Create Prototype & Feedback from user to gather more requirement & make improvement
- 4 Design and Build Iteration
- Refine the Prototype
 - Implementation
 - Put the latest version of the SW in to real life working environment
- Extreme Programming :-
- Good practices need to be practical in Extreme Programming
- Code Review :
- Detect and correct errors efficiently
 - Careful not of part of program
- 1 Feasibility Study
- Check Project is suitable for whom
 - by understanding the requirements & constraints
- 2 Testing
- Help to remove error and increase reliability

Page No.:	1 / 1
Date:	1 / 1

- Suggest TDD - driven development
- Test Cases are committed even before any code is written

~~Basics of Software Estimation :-~~

- Effective Software Project Estimation
- is important activity in Software development Project

- It Predicts the time and budget that required for Completing a Project

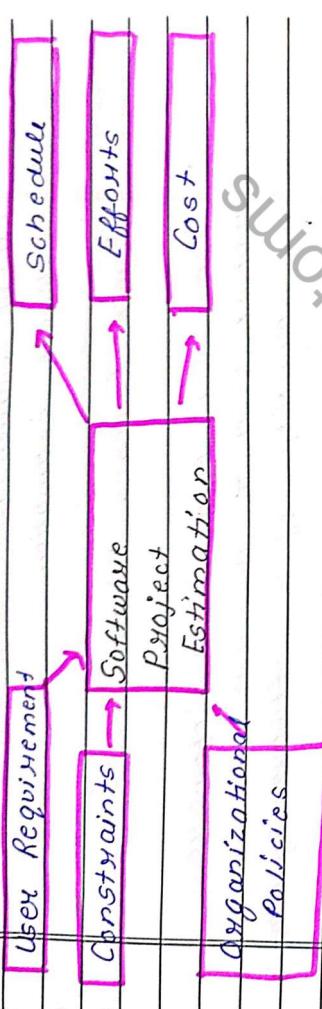
Project Estimation requires the use of complex tools & good mathematical as well as knowledge about Planning

fail

- The main reasons Software is now inability to accurately estimate Software size

Responsible Persons

- Software manager
- Cognizant Engineers
- Software Estimates



Factors affect on Project Estimation :-

- Cost
- Time
- Size & Scope
- Risk

- Resources

Steps of Software Project Estimation :-

- Estimate Project Size
- Estimation Efforts
- Estimation Project Schedule
- Estimate Project Cost

Cost & Effort Factors Points :-

Effort and Cost Estimation Technique :-

- Top down Estimation
- Bottom up Estimation

Page No.:	1
Date:	1/1/2023

- Expert Judgement
- Analogous Estimation

Cosmic Function Points Time

- Cosmic Function Point is a Software metric used to measure the size & Complexity of a Software System
- It quantifies the functionality of the System rather than focusing on line of code or technical details
- Features and Functionalities of the Software are assigned weight based on their complexity & impact
- Total Cosmic Function Points are calculated by summing up the weighted values
- CFP helps estimate the efforts and resources required for System dev.

CFP provides a Standardized measure for Comparing and estimating the Size & Complexity of different Software System

Uses of Cosmic Function Points

- Estimate development effort
- Estimate Project duration
- Estimate Project quality
- Estimate test effort

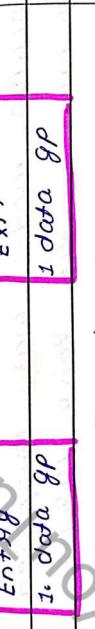
- An approximation for measurement purposes, the Cosmic method assures that the Functionality of any data manipulation is accounted for by the data movement

- There are four data movement types

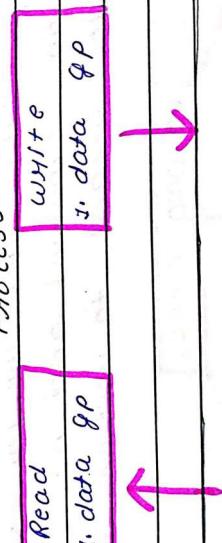
1. Entry
2. Exit
3. Write
4. Read

Functional Users

- Boundary
- Functional User



Functional Processes



Persistent Storage

Page No.:	1
Date :	/ /

COCOMO MODEL II

- Estimate Effort & Cost based on Project Complexity, Team Capabilities, Size.
- Less Accurate
- Limited Customization
- Feasibility & Customizations

Parametric Productivity Model:

- Mathematical model estimate how different factor affects the efficiency of Software development. It consider Variable like - team experience, project Complexity & tools to predict the Productivity at levels

SUBSCRIBE



Join TELEGRAM

- COCOMO Stands for "Costs constructive cost model". It is one of the very famous model which is used to estimate the cost of the project

- COCOMO model was proposed by Boehm in the year 1981
- Using this model we can estimate the time (months) and no. of people needed to develop the project

COCOMO MODEL

