



SNS COLLEGE OF ENGINEERING



Kurumbapalayam(Po), Coimbatore – 641 107

Accredited by NAAC-UGC with 'A' Grade

Approved by AICTE, Recognized by UGC & Affiliated to Anna University, Chennai

Department of Information Technology

Course Name – IT8075 Software Project Management

IV Year / VII Semester

Unit 2 – Project Lifecycle and Effort Estimation

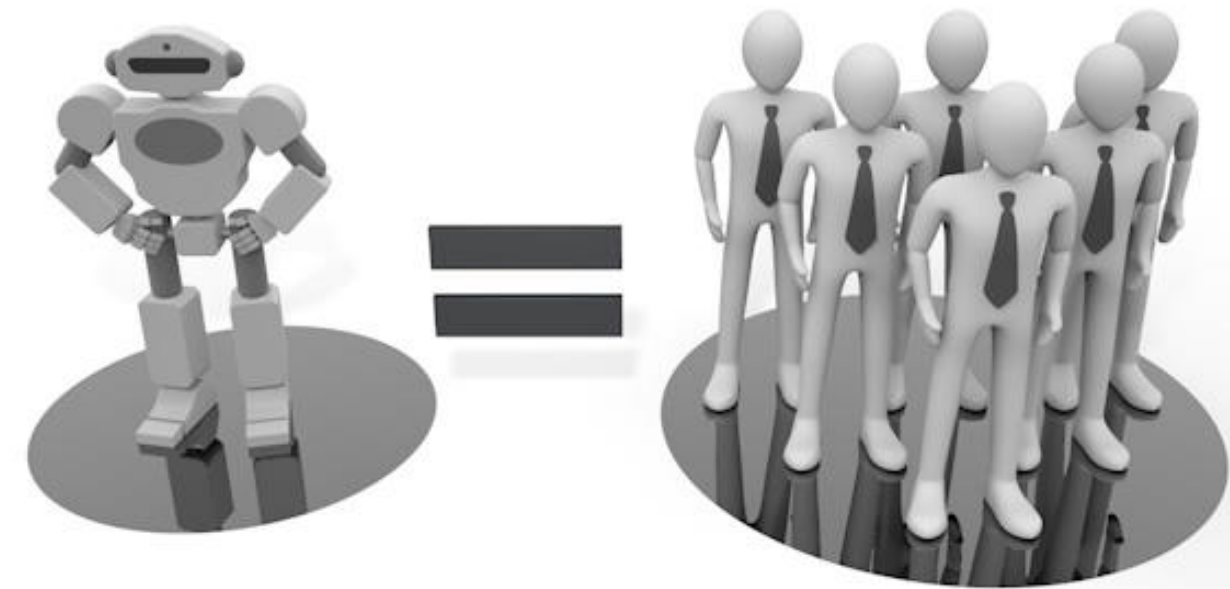
Topic 6- Software Effort Estimation Techniques



**Software effort estimating technique /
IT8075 SPM / R Sivagami / IT/SNSCE**

Answer following question

40 men can catch 200 sharks in 20 days working 6 hours a day. In how many days 25 men can catch 300 sharks working 4 hours a day?



Software Effort estimating technique

Ways of deriving estimate
Effort as

- Algorithmic models
- Expert Judgment
- Analogy
- Parkinson
- Price to win
- Top down
- Bottom up



Software Effort estimating technique

Algorithmic models – uses effort drivers

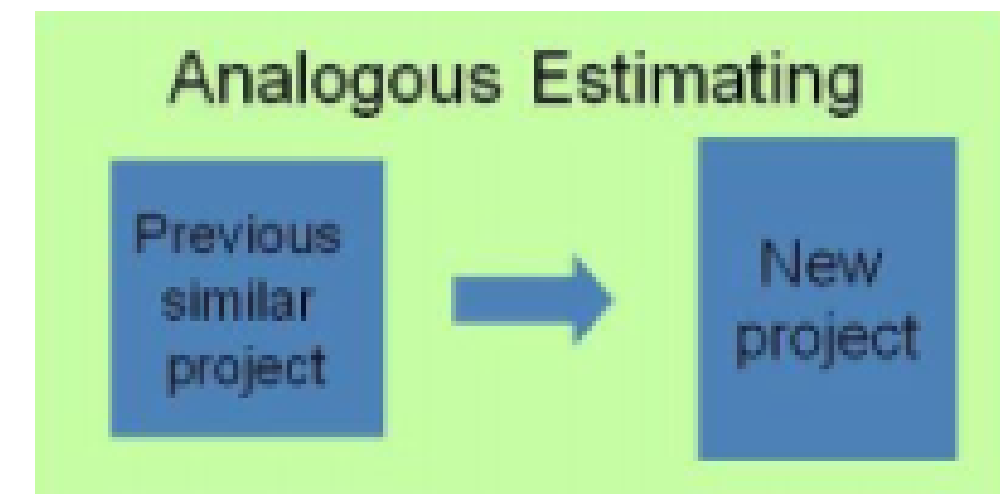
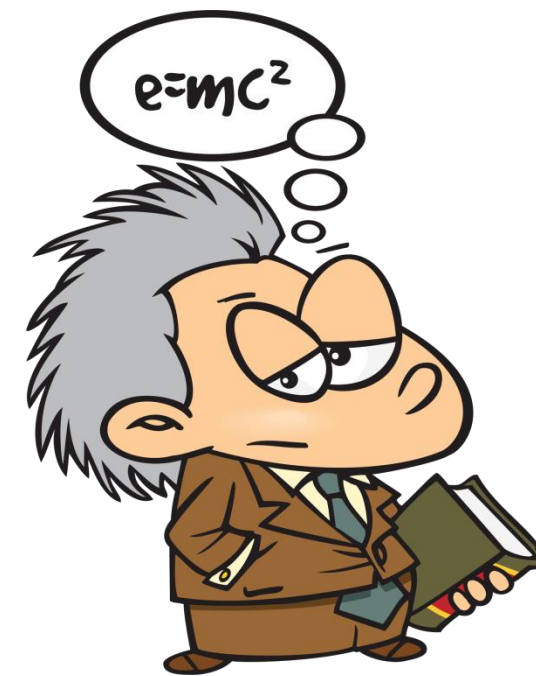
- How to predict effort?

Expert Judgment

- Knowledgeable staff

Analogy

- Completed project's effort is taken as current ones estimate.



Software Effort estimating technique

Parkinson

- Staff effort to do a project becomes the estimate.



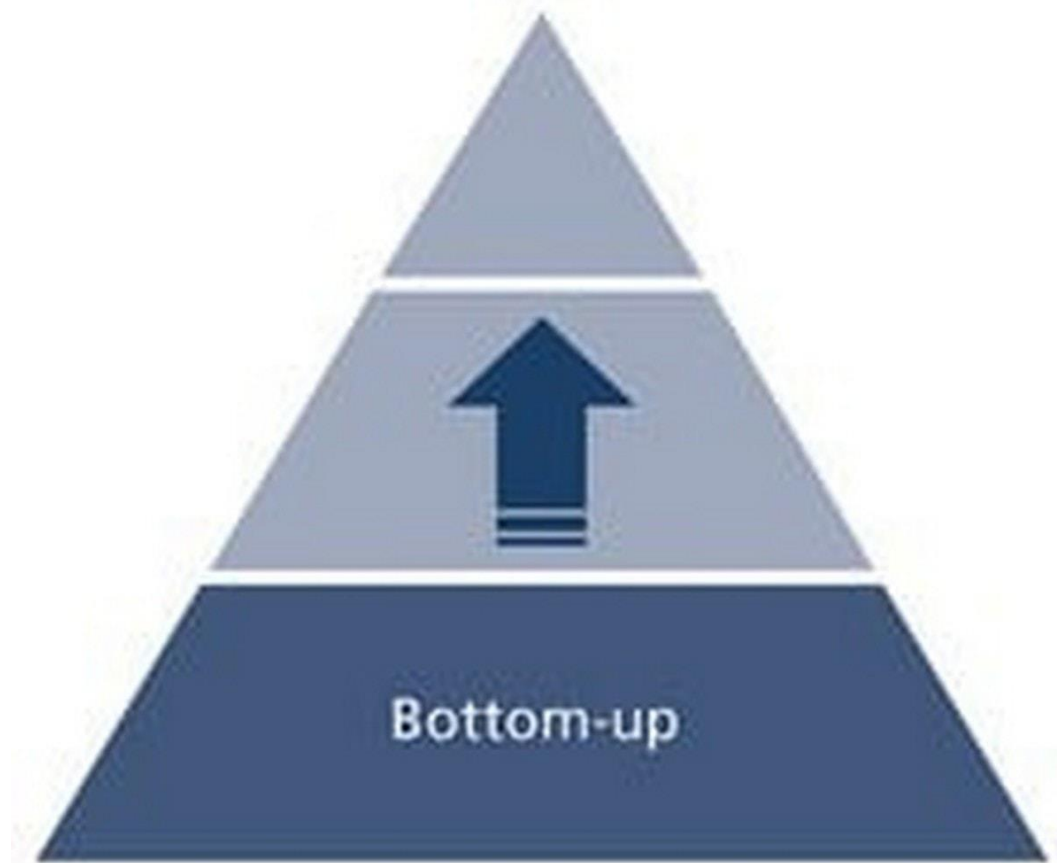
Price to win

- Estimate is a figure that sufficiently low to win a contract.

Software Effort estimating technique

Bottom up estimating

- Breaks projects into component task.
- iterative
- Tasks further divided as subtasks.
- Suitable for more detailed stages of project planning.
- Used when Novel or no historical data available.



Software Effort estimating technique

Procedural code oriented approach

- Envisage the number and type of modules in the final system
- Estimate SLOC of each identified module
- Estimate the work content taking into account complexity and technical difficulty
- Calculate the work days effort.

```
23 lines (19 sloc) 553 Bytes
1 import RPi.GPIO as GPIO
2
3 fing1 = 6
4 fing2 = 13
5 fing3 = 19
6 fing4 = 26
7 GPIO.setmode(GPIO.BCM)
8
9 GPIO.setup(fing1, GPIO.IN, pull_up_down = GPIO.PUD_UP)
10 GPIO.setup(fing2, GPIO.IN, pull_up_down = GPIO.PUD_UP)
11 GPIO.setup(fing3, GPIO.IN, pull_up_down = GPIO.PUD_UP)
12 GPIO.setup(fing4, GPIO.IN, pull_up_down = GPIO.PUD_UP)
13
14 while True:
15     if (GPIO.input(fing1) == 0):
16         print("fing1")
17     if (GPIO.input(fing2) == 0):
18         print("fing2")
19     if (GPIO.input(fing3) == 0):
20         print("fing3")
21     if (GPIO.input(fing4) == 0):
22         print("fing4")
23
```



The screenshot shows a software window titled "Enter expenses". It features a calendar for August 2015 on the left. The main area contains a form with fields for "Staff Name", "Client Name", and "Description". Below these are radio buttons for "Receipts Supplied" (Yes/No) and five input fields for expense categories: "Airfare", "Accommodation", "Ground Transport", "Food & Drink", and "Misc.". On the right side, there are buttons for "Add", "Insert", "Update", "Delete", "Clear", and "Close".



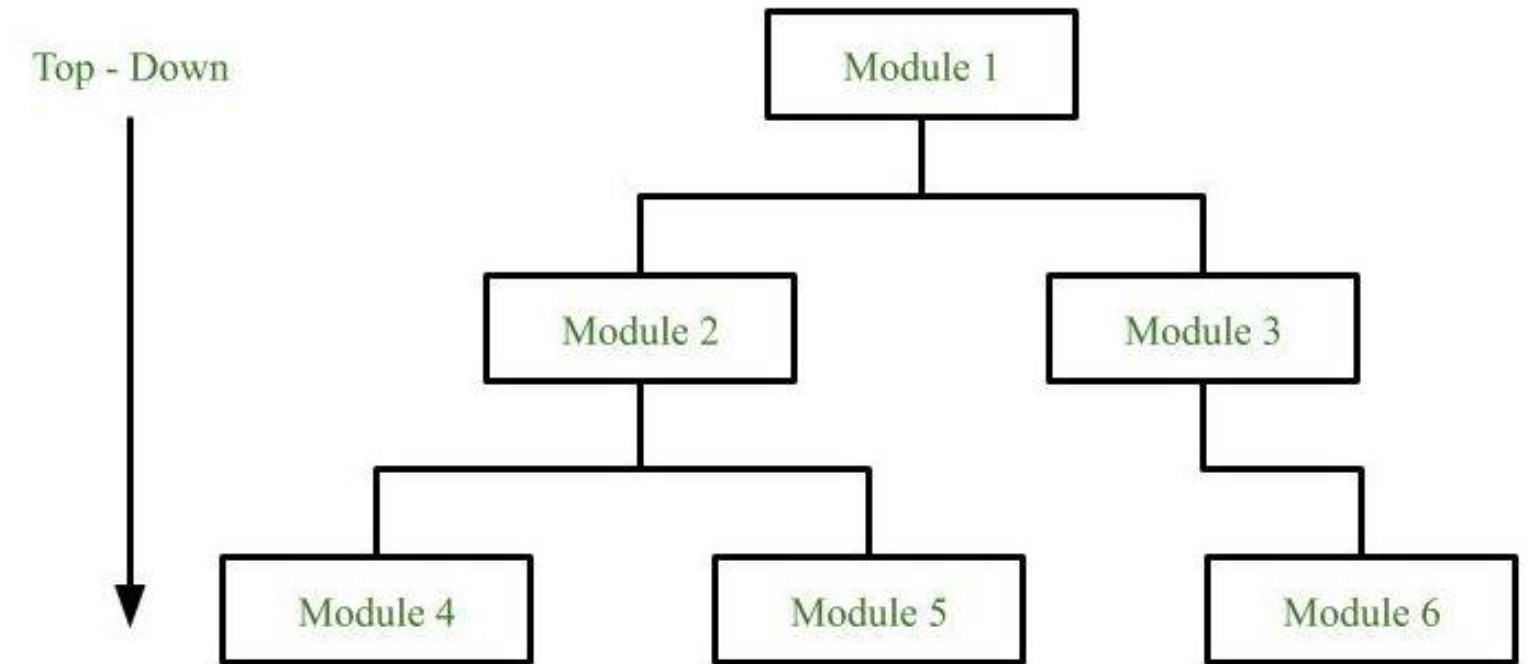
Software Effort estimating technique

Top down approach and parametric models

$$\text{Effort} = \text{system size} * \text{productivity rate}$$

Estimating - Two components

- Method or assessing the amount of work needed.
- Rate of work at which tasks can be done
- Productivity = effort / size





THANK YOU