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

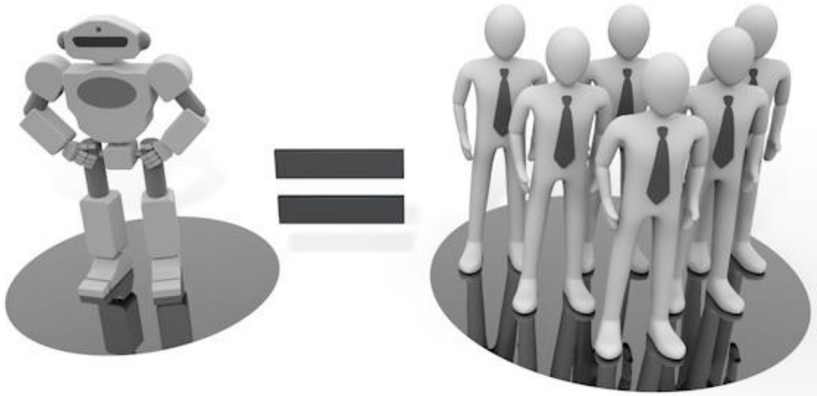
IV Year / VII Semester

Unit 2 – Project Lifecycle and Effort Estimation

Topic 6- Software Effort Estimation Techniques

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

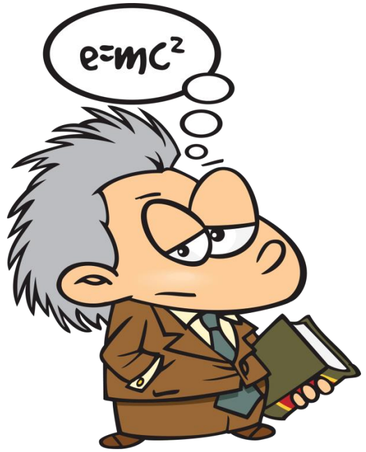
- How to predict effort?

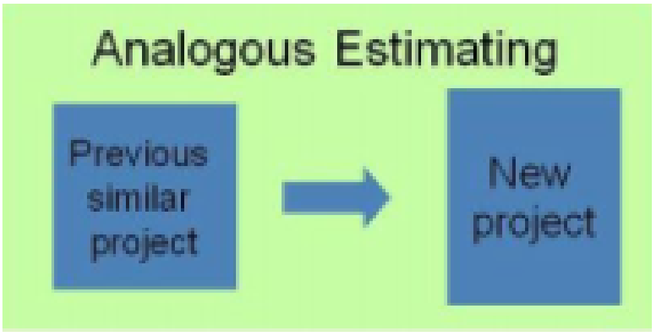
Expert Judgment

- 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.

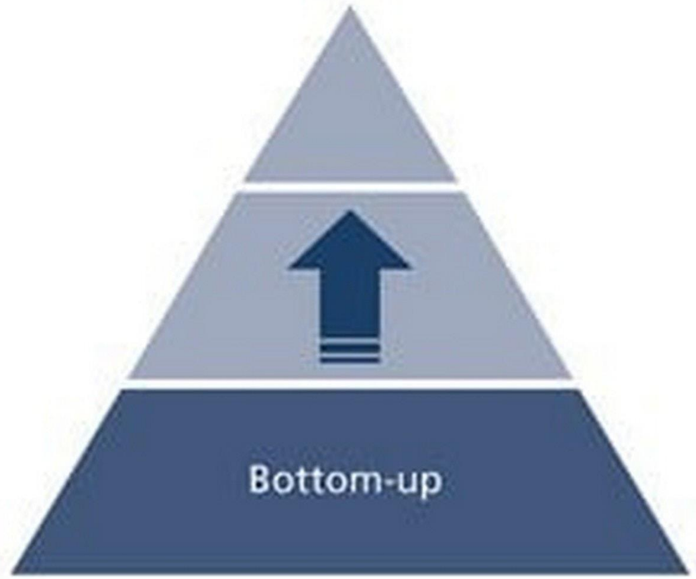
Price to win

- 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.

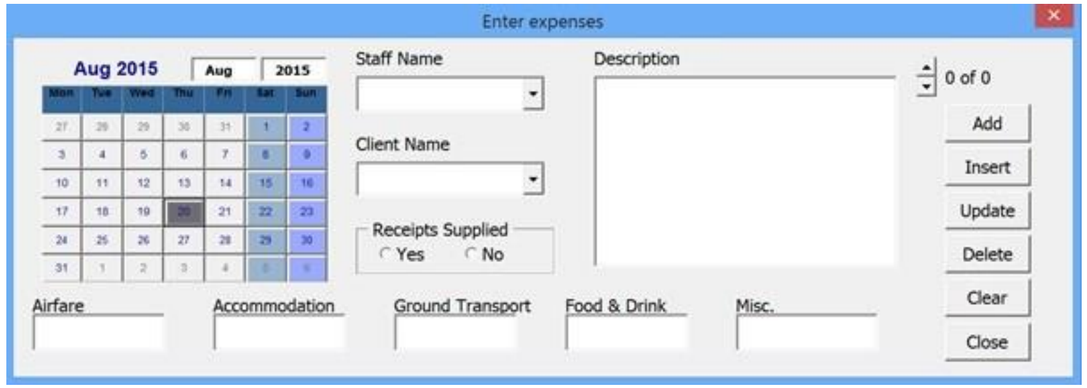
```
23 lines (19 sloc)   553 Bytes
```

```python
import RPi.GPIO as GPIO

fing1 = 6
fing2 = 13
fing3 = 19
fing4 = 26
GPIO.setmode(GPIO.BCM)

GPIO.setup(fing1, GPIO.IN, pull_up_down = GPIO.PUD_UP)
GPIO.setup(fing2, GPIO.IN, pull_up_down = GPIO.PUD_UP)
GPIO.setup(fing3, GPIO.IN, pull_up_down = GPIO.PUD_UP)
GPIO.setup(fing4, GPIO.IN, pull_up_down = GPIO.PUD_UP)

while True:
    if (GPIO.input(fing1) == 0):
        print("fing1")
    if (GPIO.input(fing2) == 0):
        print("fing2")
    if (GPIO.input(fing3) == 0):
        print("fing3")
    if (GPIO.input(fing4) == 0):
        print("fing4")
```

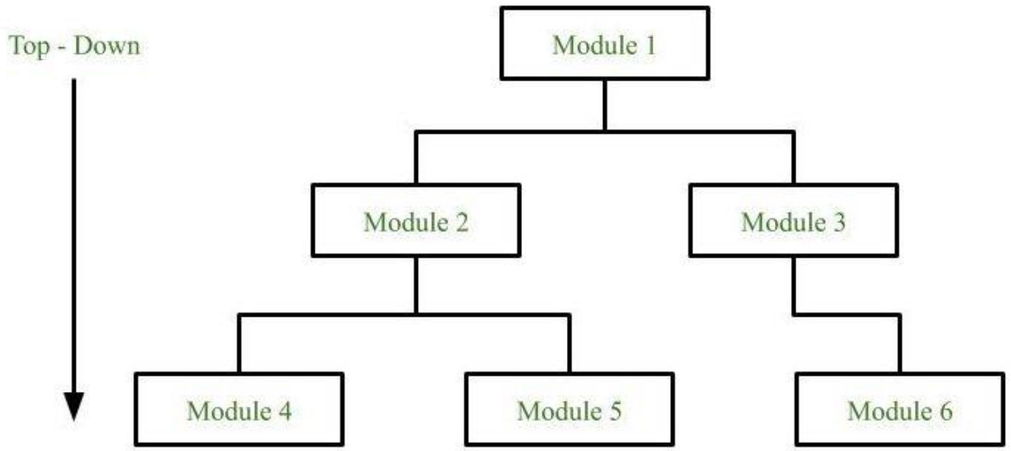


Software Effort estimating technique

Top down approach and parametric models
Effort = system size * 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