12.08.20

TUTORIAL

JOVIAL JOE

Q1.) Explain PNR with a neat graph.

Q2.) Explain how risks are managed by project managers.

Q3.) Explain building blocks of CASE tools.

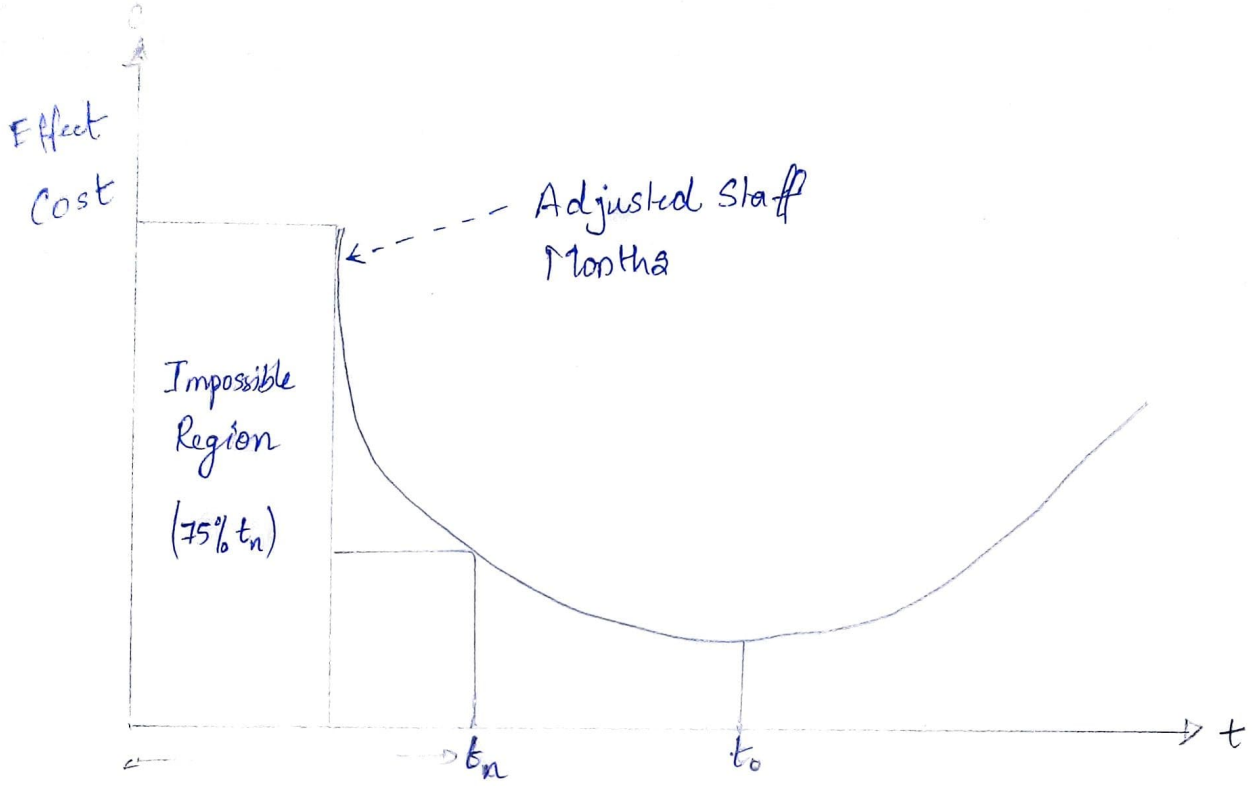
Answers

A1.) ~ Converting effort estimates into project duration and team sizes is an important part of project planning.

~ While adding team members to a project, increases cost in a a linear fashion.

~ Research by Putnam Norden found that for projects that require communication and learning, the efforts follows a Rayleigh distribution.

~ The Putnam Norden Rayleigh (PNR) curve. is shown below:



t_n = Nominal delivery time

t_o = Optimal delivery time (in terms of cost) = $2\,t_n$

- The curved line is the PNR staffing curve, the X axis shows time and the Y axis shows costs
- The optimal delivery time (t_o) indicates the lowest cost that the project could be delivered for.
- If we move from right to left we see that the curve gets steeper and steeper (indicating increased cost) but not much of a shortening in timeline.
- Most companies are looking for the best compromise between low cost and short timelines as indicated by the nominal delivery time "T_n".

A2.) Risk Management

- Risk is a potential obstatacle that has the equal probability of occuring or not.
- Irrespective of the predicament Risk Management is the procus of identifying the risk, with its probabilty of risk.
- Not just that, risk managent involves estimation of its imapat and sketching a logical palan to handle the plausible situation.
- To identify Risk it can be generally classified as

(i) Known Risks: Those risks which can brought to light after strict scruting of the Project, Busines and tehnical environment.

(ii) Predicatable Risks: These risk can be forseed using various memods like studying the past history, driving a conclusion, plausible inferences from the overall environment.

(iii) Unpredictible Risks: As the name says they beyond the reach of the human evaluation.

~ Risk can be further classified on the basis of various keystones.

~ Then the Risk is handled in such away that the impact it may cause is either nullified or minimized.

~ The risks are also monitoror all throught the project as that may enable them or more correctly ~~take~~ to empower them to take reflexive action accurately.

~ There are varios factors uschas: technical, marketing, business, sales, interal staff, exteral environment, product specifications, stakeholders characteristics, technological barriers, budget deadlines etc. to be considerd when a project manager tries to manage risk.

~ Project managers are he was advice to be ready for any thing. with timely identification risk drivers he or she can succeed in progressing the Project.

A2.) Computer Aided Software Engineering (CASE)

- Computer aided software engineering is the implementation of computer facilitated tools and methods in software development.
- CASE is used to ensure high quality and defect-free software.
- It ensures a checkpointed and disciplined approach and helps designers, developers testers and everyone else to view the project milestones during development.
- There are various types of case tools:

1. Diagraming Tools:
   - Helps in diagramic & graphical representation of data & system processes.
   eg:- Flow Charts maker tool, UML creators.
2. Report Generators
   - It helps in understanding the data requirements and relationships involved.
3. Analysis Tools
   - It focuss on inconsistand an incorrect specification involved in the diagram. eg:- Accept 360

4. Central Repository

- It provides the single point of storage for data diagrams, reports and documents related to project management.

eg:- GitHub, GitLab etc.

5. Document Generators

- Helps in generating user & technical docus as per standards. It caters docus for technical & end users.

eg:- README.md & LICENCE.md generators on GitHub.

6. Code Generators

- It aids or helps to generate bulk code automatically - sometimes as a template to begin a project

eg:- 'flutter run' - helps in creating a demo project with around 400MB of autogenerated code.