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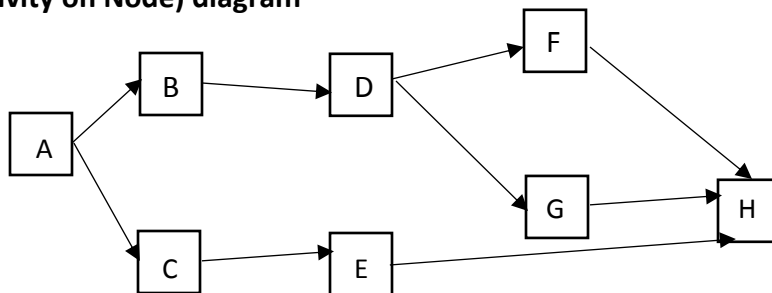
SEPM Assignment 3

1. **Project Information is given in the following table:**

Activity	Predecessor activity	Duration (days)
A	None	2
B	A	4
C	A	3
D	B	2
E	C	3
F	D	6
G	D	5
H	F, G, E	4

Ans:

a) **AON (Activity on Node) diagram**

b) **Find the critical path.**

Possible Path	Path	Total (days)
Path 1	A→B→D→F→H 2+4+2+6+4	18*
Path 2	A→B→D→G→H 2+4+2+5+4	17
Path 3	A→C→E→H 2+3+3+4	12

Critical Path: A→B→D→F→H (18 days)

c) **What is the total schedule (in days) for the above project?**

Total Schedule for the above project is 18 days.

d) **Find the total slack (float) time for each path.**

Total Slack Time = (Critical Path Duration) – (Duration of Selected Path)
Slack Time (Path 1) = 0 day
Slack Time (Path 2) = 1 day
Slack Time (Path 3) = 6 days

e) **List down the critical and non-critical activities for the project.**

Critical Activates are: {A, B, D, F, H}
Non-Critical Activates are: {C, E, G}

2. **Develop a Risk management plan for online examination system.**
Ans:

a) **Identify total five risks for the project.**

- Experienced staff from the team leave the project midway before completion for another project or illness (Project Risk).
- Budget does not cover costs arising mid development die to unforeseen circumstances (Project Risk).
- Unable to find code components that fit project requirements (Technical Risk).
- The project team is unable to acquire a meeting location (Business Risk).
- The term s unable to meet set deadlines for the project because of unforeseen complications in development (Project Risk).

b) **Develop Risk table.**

Risk Summary	Risk Category	Probability	Impact
• Senior Staff leaving team	Project	0.1	1
• Inadequate budget	Project	0.7	2
• Code components unavailable	Technical	0.8	3
• No meeting place	Business	0.5	4
• Failure to meet deadline	Project	0.6	2

c) **Calculate Risk exposure for all risks.**

- May need to increase salary or hire new experienced staff on short notice.
  Exposure = 0.1 * $20000 = $2000
- May need to increase the budget by allocating additional resources.
  Exposure = 0.7 * $5000 = $ 3500
- Programmers need to spend additional time writing components from scratch or modify existing
  Exposure = 0.8 * $5000 = $4000
- Team will have to setup online development environment possibly requiring third party licenses.

Exposure = 0.5 * $ 2500 = $ 1250
- Client may have clauses in project agreement landing to payment reduction if deadline not met.
Exposure = 0.6 * $ 5000 = $ 3000

d) Explain the risk mitigation, monitoring and management plan for ant one risk.

Risk ID: 1
Probability: 10%
Impact: Catastrophic
Description: Some of the senior staff from the original development team are expected to be absent from the development process for over 50% of project duration.

Refinement/ Context:
- Sub condition 1 – The project lead has contracted a serious illness leading to them being unavailable for unforeseen future.
- Sub condition 2 – Some of the lead developers were approached by a competition and have accepted their for paying the termination penalty

Mitigation/ Monitoring:
- Endure health check-ups for staff members.
- Update termination penalty to be higher depending on the project and member importance.
- Ensure adequate compensation provided to staff

Management/ Contingency Plan/ Trigger:
Risk exposure $2000. Allocate this amount to project contingency cost/. Develop revised schedule owing to new staff onloading. Keep resumes on file to find new member quickly.