# Unit 17: IT Project

## Project Management Tools - CPA

# Learning Outcomes

- To recap on why projects fail
- To be able to describe the CPA process
- To explain how a critical path can be identified

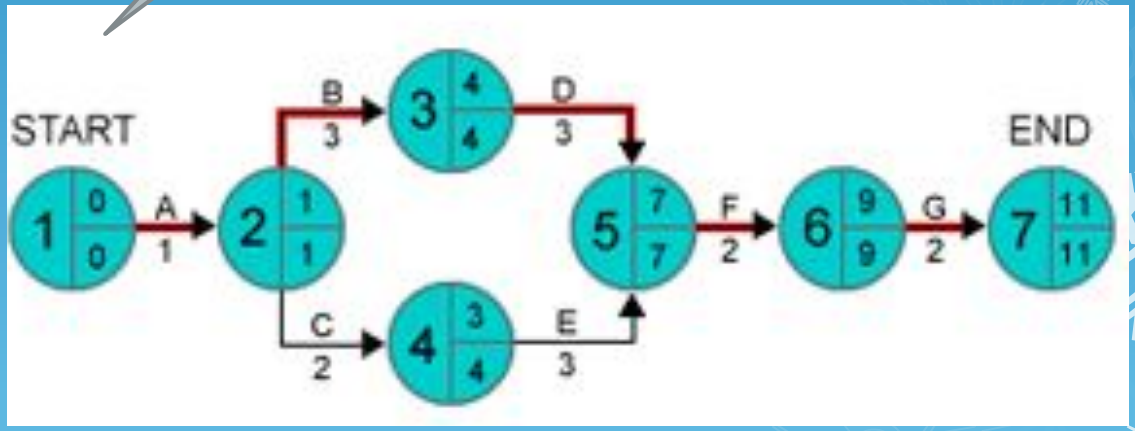
# Reasons Projects Fail

- Poor planning
  - Are the time scales accurate?
  - Are the resources identified available?
- People
  - Are there enough?
  - Do they have the right skills?
- Technology
  - Is the technology available?
    - Is it reliable?
- Political
  - Have all stakeholders agreed the project objectives?
- Financial
  - Are the sufficient funds available?
  - Is the right person in charge of the funds?
- Environmental
  - Will the weather affect the project?
- Physical risks
  - Have risks been identified and action put in place to minimise the

# Critical Path Analysi

How might CPA minimise some of the risks of project failure?

- Critical path analysis is a project m
  that;
  - identifies critical activities
  - Identifies the logical se cing of tasks
  - Identifies the overall oject milestones and end date



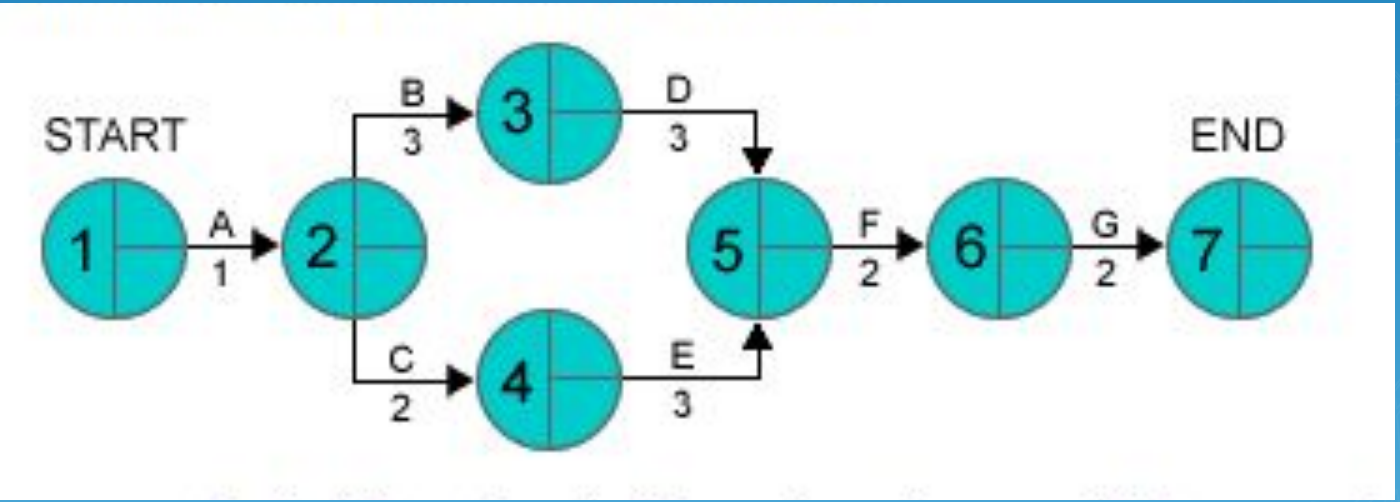
# Why do we use it?

1. Determines the time to complete the project and key milestones
2. Allows tracking of critical activities
3. Provides a visual presentation of the project

# 5 Steps in Critical Path Analysis

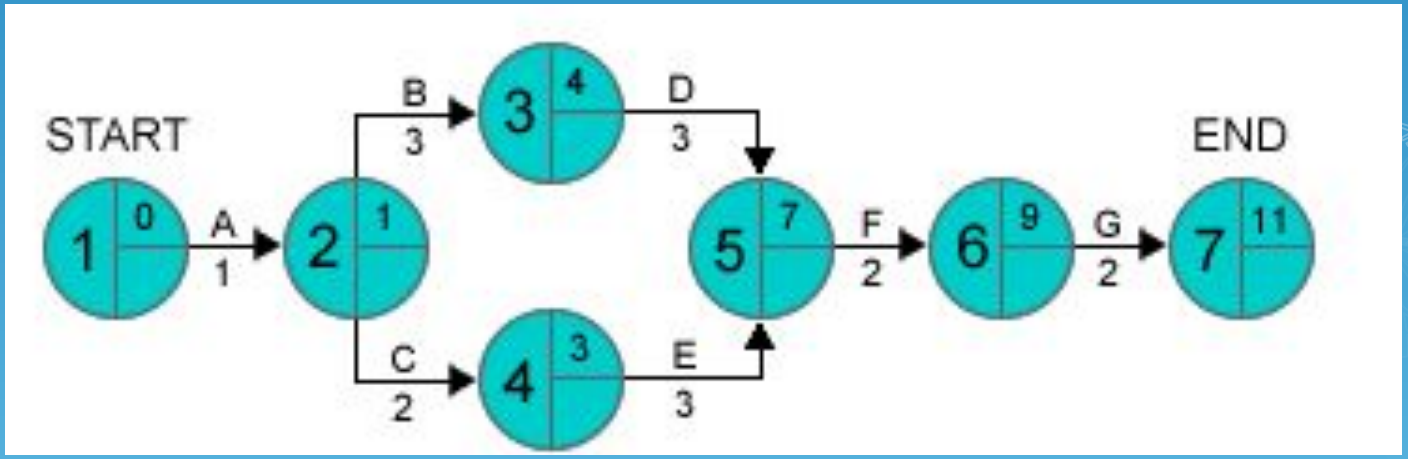
1. Specify activities
2. Establish dependencies & Activity Sequence
3. Produce network diagram
4. Estimate the completion time for each activity
5. Identify the critical path (longest path through the network)

# Network Diagram



# Earliest start times (EST)

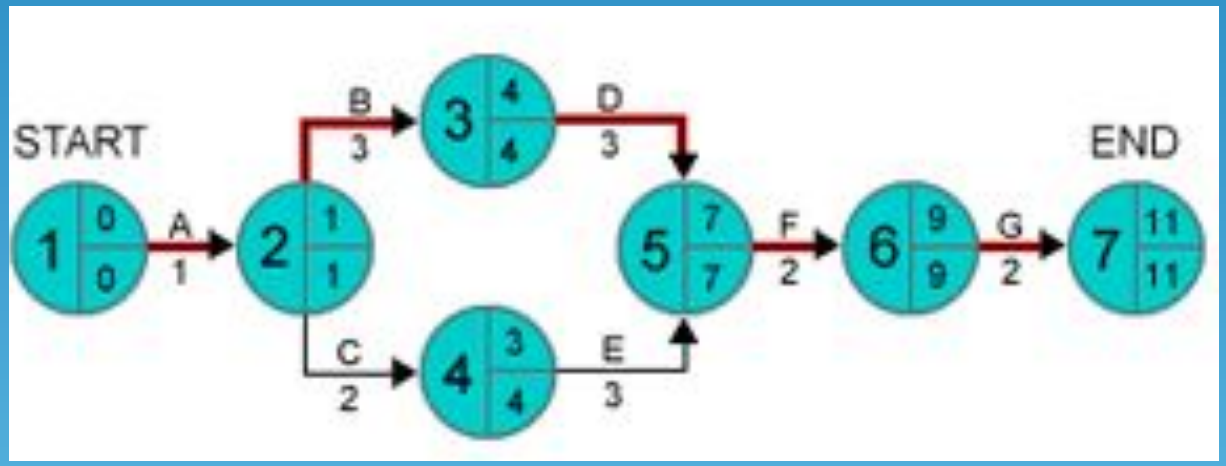
Add



# Latest finish times (LT

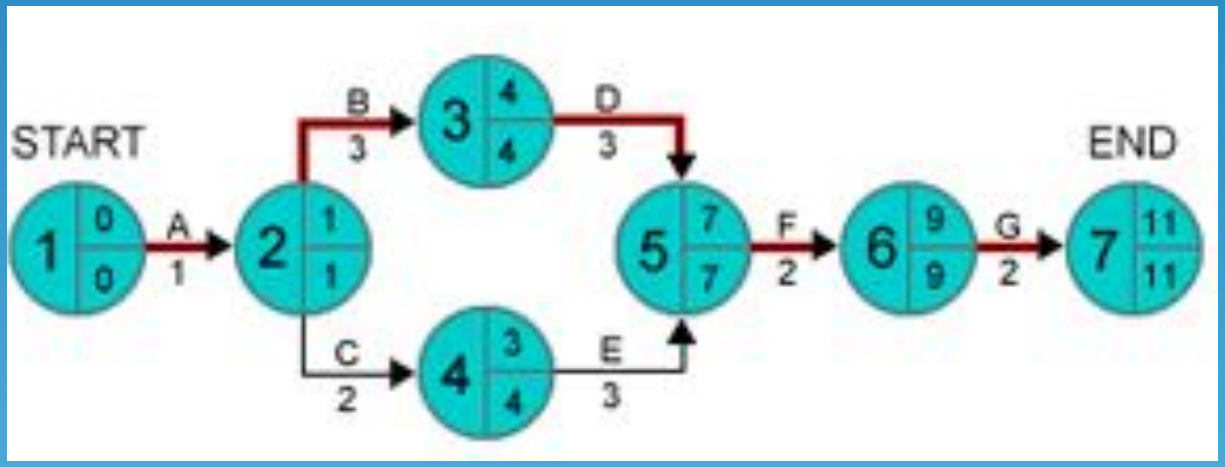
Do you notice a problem with any of the latest finish times?

Subtract



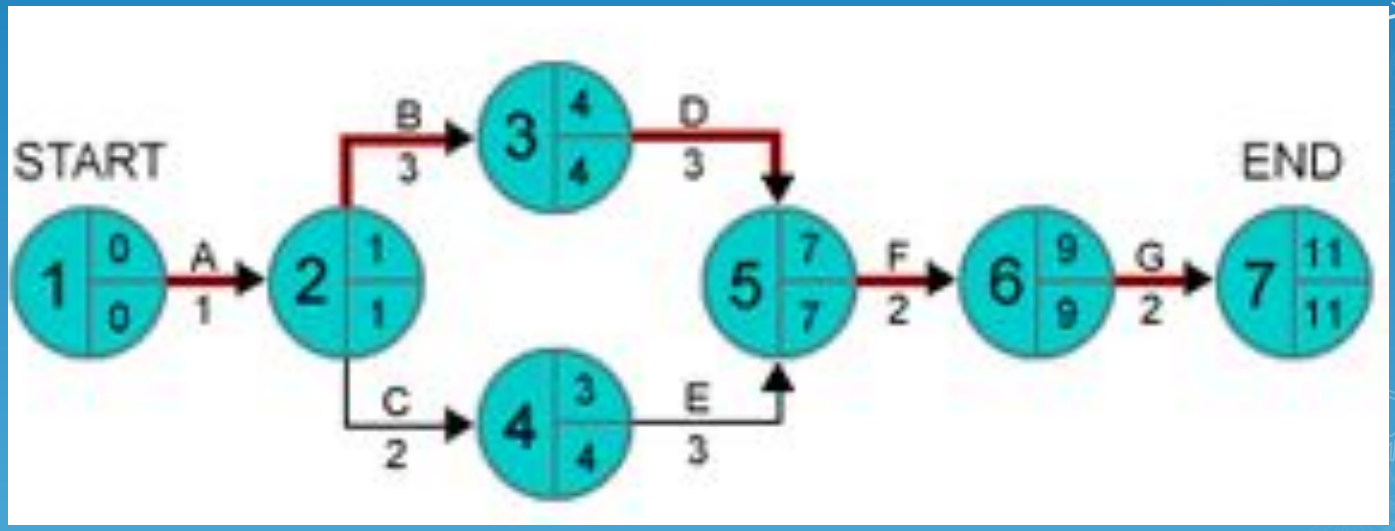
# Slack time

## Aka float time




Slack time is the difference between est and lft

# Identifying the critical path




Critical path is the path where the est = lft

# Task (P2)

1. Describe the CPA process
2. Explain the terms slack time, earliest start time, latest finish time and critical path
3. Explain how the critical path can be identified