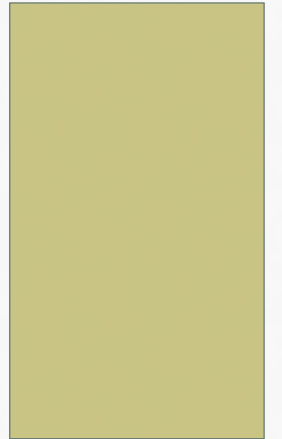
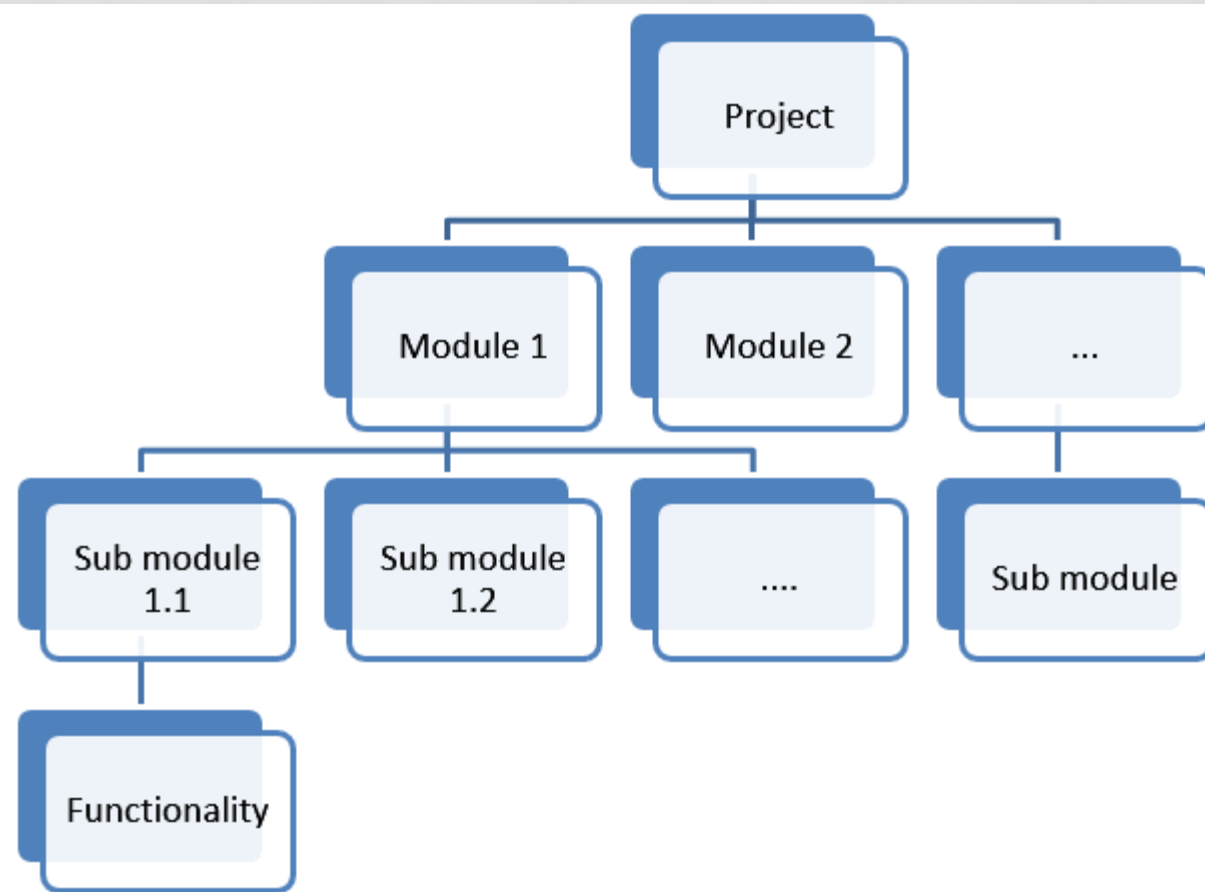


PROJECT SCHEDULING

LESSON 4 – CCS 6
LECTURE NOTES PREPARED/COMPILED BY
ASST. PROF. MELODY ANGELIQUE C. RIVERA
FACULTY, COLLEGE OF COMPUTER STUDIES, SILLIMAN UNIVERSITY



WORK BREAKDOWN STRUCTURE (WBS)



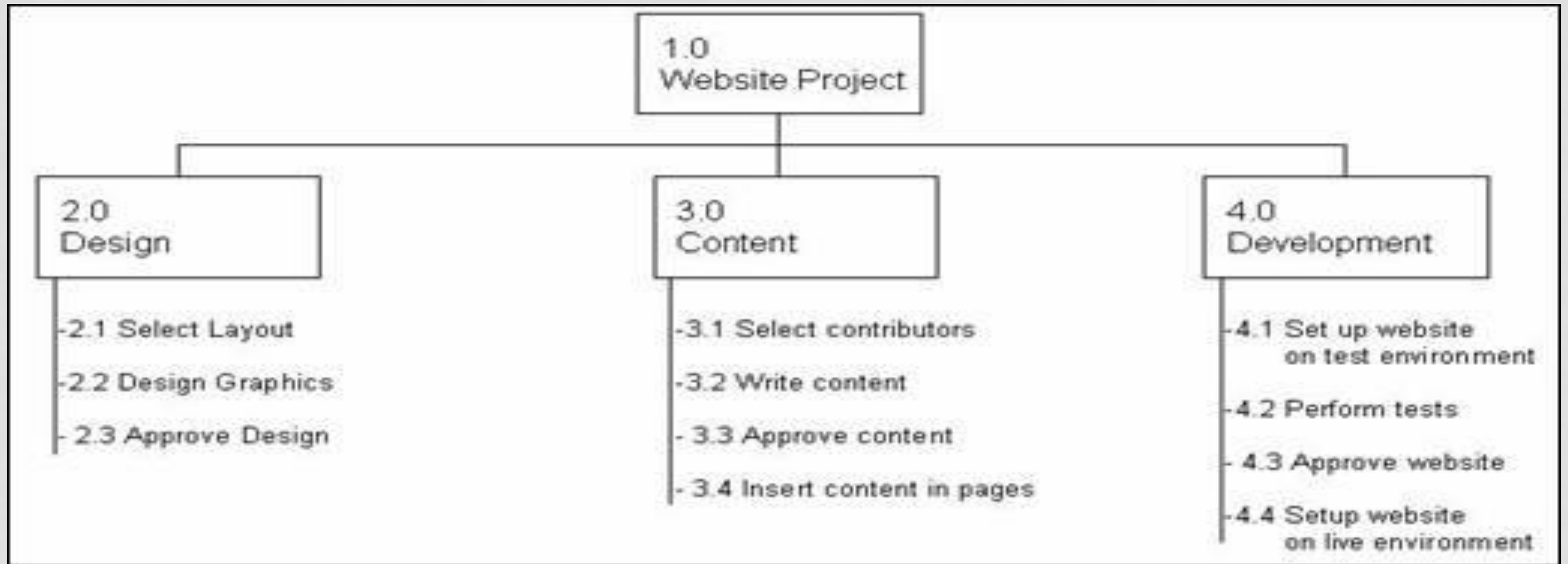
According to Project Management Body of Knowledge (PMBOK®):

The work breakdown structure can be used to:

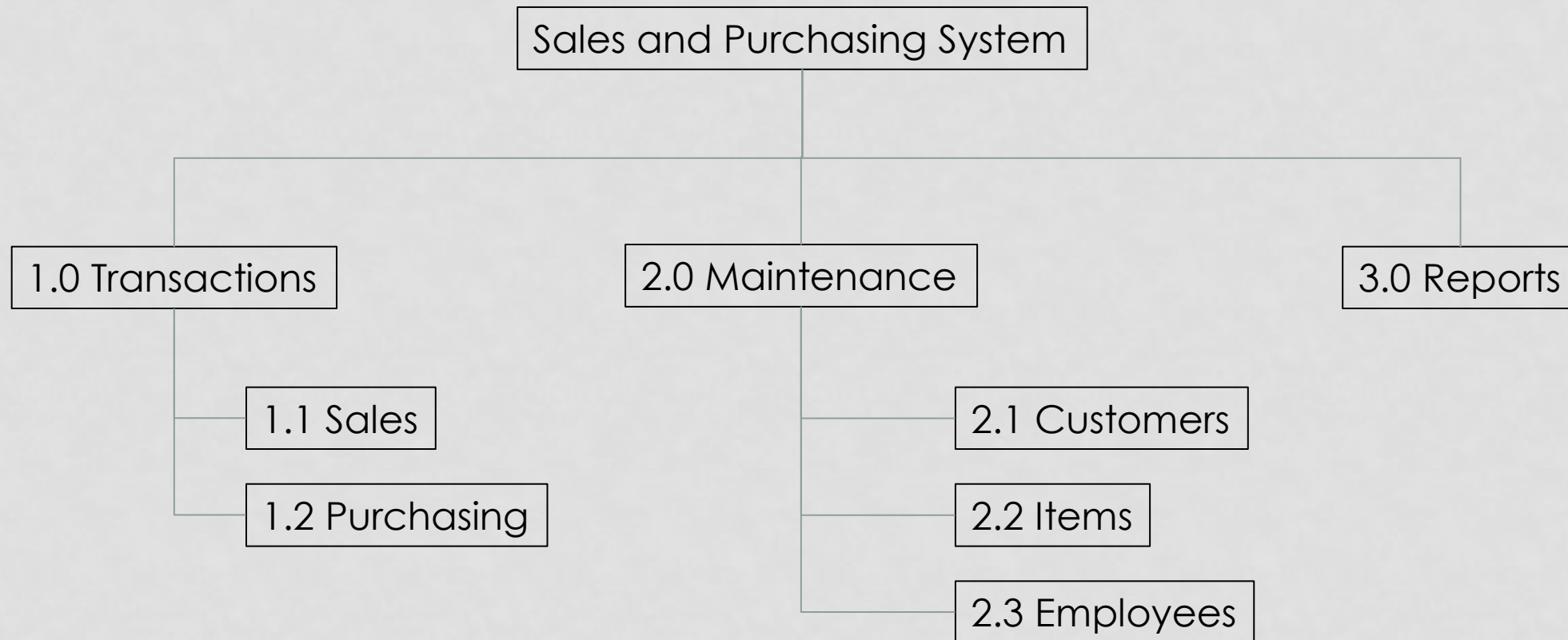
- 1) effectively decompose the project scope
- 2) improve estimating
- 3) better control the project execution and
- 4) more accurately verify project completion

A repeatable process that can be used as a template for future projects

EXAMPLE 1



EXAMPLE 2



ACTIVITY PLANNING AND CONTROL

ESTIMATING TIME REQUIRED

- Beginning to plan a project is by breaking it into three major activities

Phase	Activity
Analysis	Data gathering Data flow and decision analysis Proposal presentation
Design	Data entry design Input design Output design Data organization
Implementation	Implementation Evaluation

REFINING THE PLANNING AND SCHEDULING OF ANALYSIS ACTIVITIES

Activity	Detailed Activity	Weeks Required
Data gathering	Conduct interviews	3
	Administer questionnaires	4
	Read company reports	4
	Introduce prototype	5
	Observe reactions to prototype	3
Data flow and decision analysis	Analyze data flow	8
Proposal preparation	Perform cost-benefit analysis	3
	Prepare proposal	2
	Present proposal	2

USING GANTT CHARTS FOR PROJECT SCHEDULING

- an easy way to schedule tasks
- bars represent each task or activity
- the length of each bar represents the relative length of the task
- main advantage: *simplicity*
- Another advantage: *the size of the bar indicates the relative length of time it will take to complete each task*

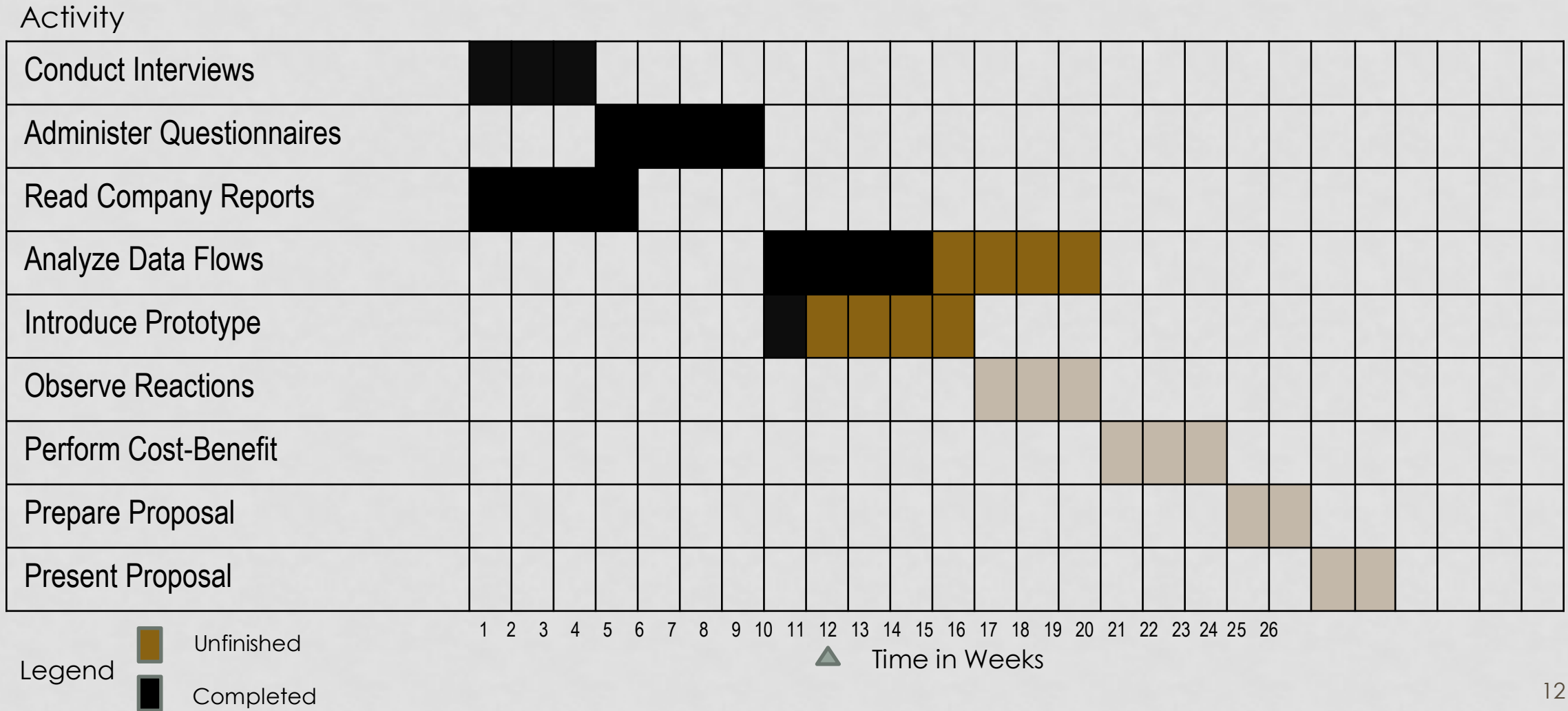
GANTT CHART

EXAMPLE

PHASES	ACTIVITIES
Preliminary Investigation	Conduct Interviews Administer Questionnaires
	Read Company Reports Analyze Data Flows
	Introduce Prototype Observe Reactions
	Perform Cost-Benefit
	Prepare Proposal Present Proposal

Phase	ID	Activities	Predecessor	Duration (weeks)
Preliminary Investigation	A	Conduct Interviews	None	3
	B	Administer Questionnaires	A	4
	C	Read Company Reports	None	4
	D	Analyze Data Flows	B, C	8
	E	Introduce Prototype	B, C	5
	F	Observe Reactions	E	3

EXAMPLE (USING THE DATA ON SLIDE 10)

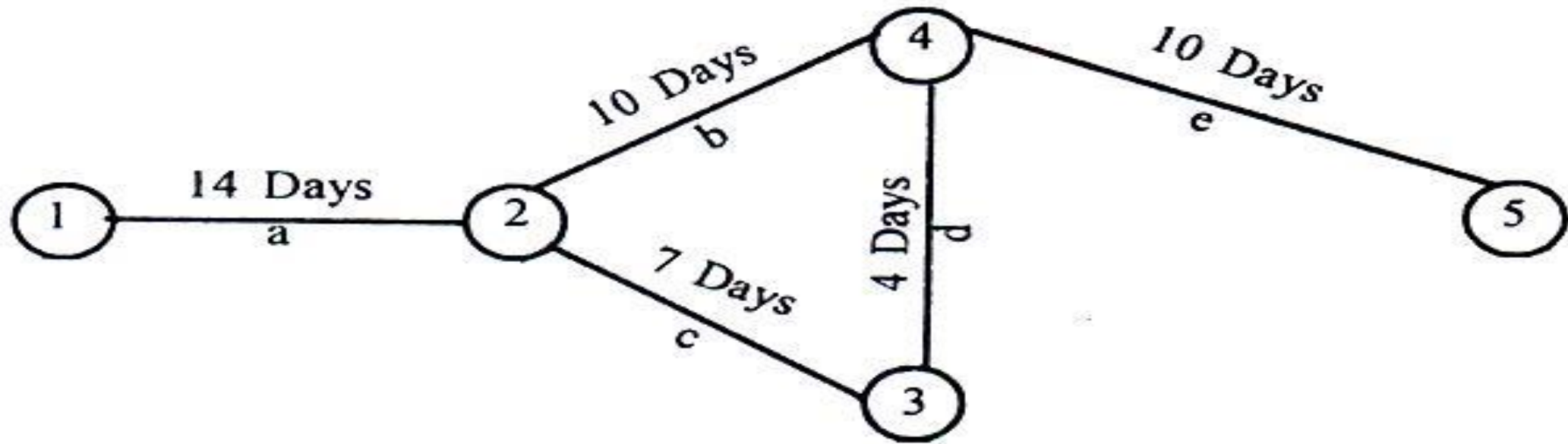


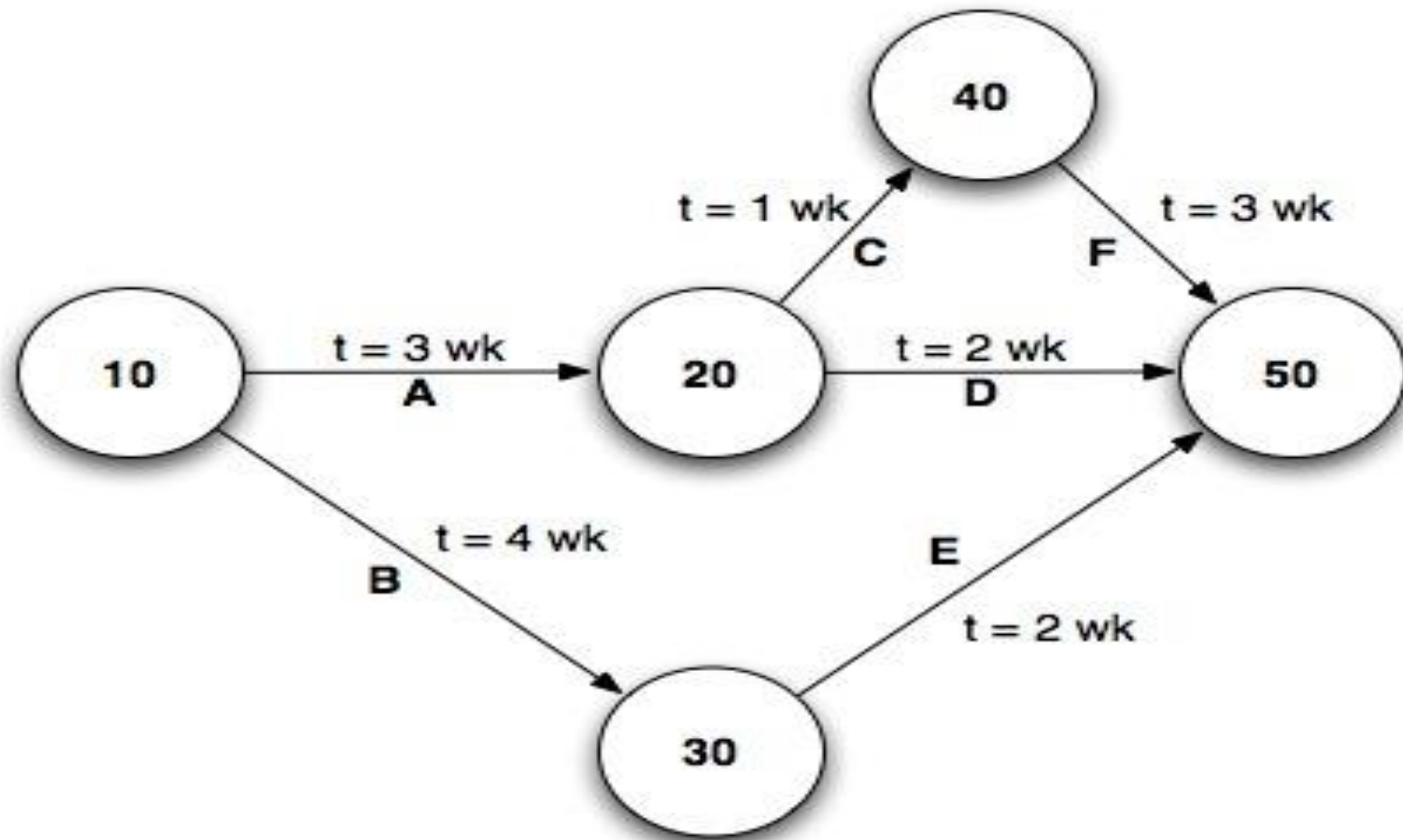
PERT DIAGRAM

PERT DIAGRAM

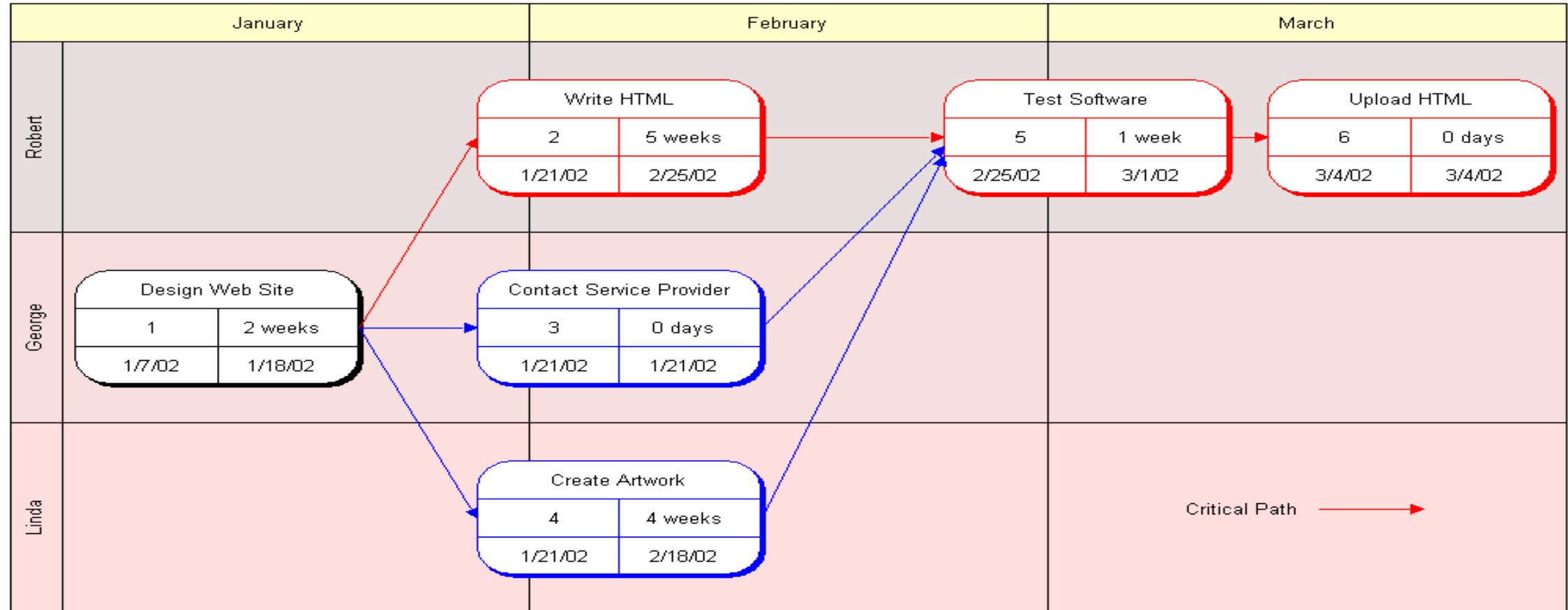
- **P**rogram **E**valuation and **R**eview **T**echniques
- Represented by a network of nodes and arrows that are then evaluated to determine the critical activities, improve the schedule if necessary, and review progress once the project is undertaken
- Developed in the late 1950s for use in the US Navy's Polaris nuclear submarine project
- Useful when activities can be done in parallel rather than in sequence
- Systems Analysts (SAs) apply it to a systems project on a smaller scale especially when some team members can be working on certain activities at the same time that fellow members are working on other tasks

EXAMPLES



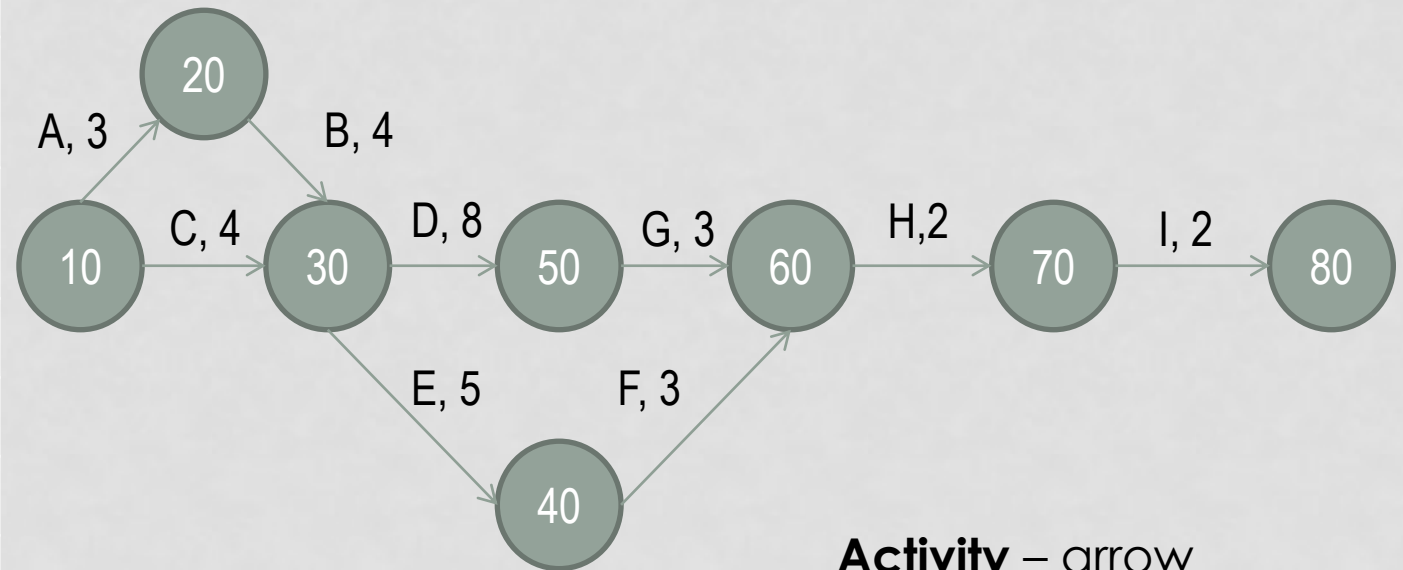


PERT/CPM - Web Site Design Process



CRITICAL PATH METHOD (CPM) EXAMPLE

	Activity	Predecessor	Duration
A	Conduct Interviews	None	3
B	Administer Questionnaires	A	4
C	Read Company Reports	None	4
D	Analyze Data Flows	B, C	8
E	Introduce Prototype	B, C	5
F	Observe Reactions	E	3
G	Perform Cost-Benefit	D	3
H	Prepare Proposal	F, G	2
I	Present Proposal	H	2

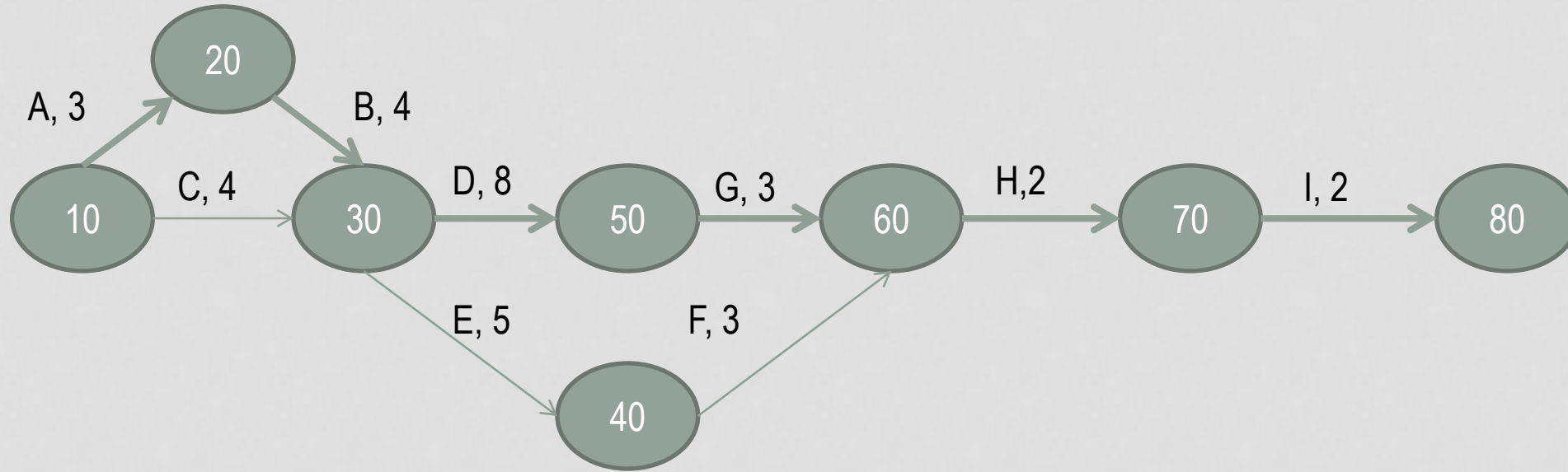


Activity – arrow
Event – circle

Non-critical paths:

10-30-50-60-70-80 = 19 days

10-30-40-60-70-80 = 16 days



Critical Path → 10-20-30-50-60-70-80 (22 days)

The SA has to carefully monitor the activities on this path so as to keep the entire project on time or even shorten the project length if warranted

SEATWORK

- Create a Gantt Chart and a PERT diagram using the data in the table (Use MS Word)
- For the PERT diagram, list all paths and calculate and identify the critical path
- Save as **<FamilyName>SW.pdf** before submitting

Description	Task ID	Predecessor	Time (Weeks)
Draw Data Flow	A	None	5
Draw Decision tree	B	A	4
Revise Tree	C	B	10
Write up Project	D	C, I	4
Organize Data Dictionary	E	A	7
Draw output prototype	F	None	2
Revise output design	G	F	9
Write use cases	H	None	10
Design database	I	H, E, G	8

END OF PRESENTATION