

# Project Planning & Control

## *Lesson 6*

### *Representing Results in a Bar Chart, AON Example -2*

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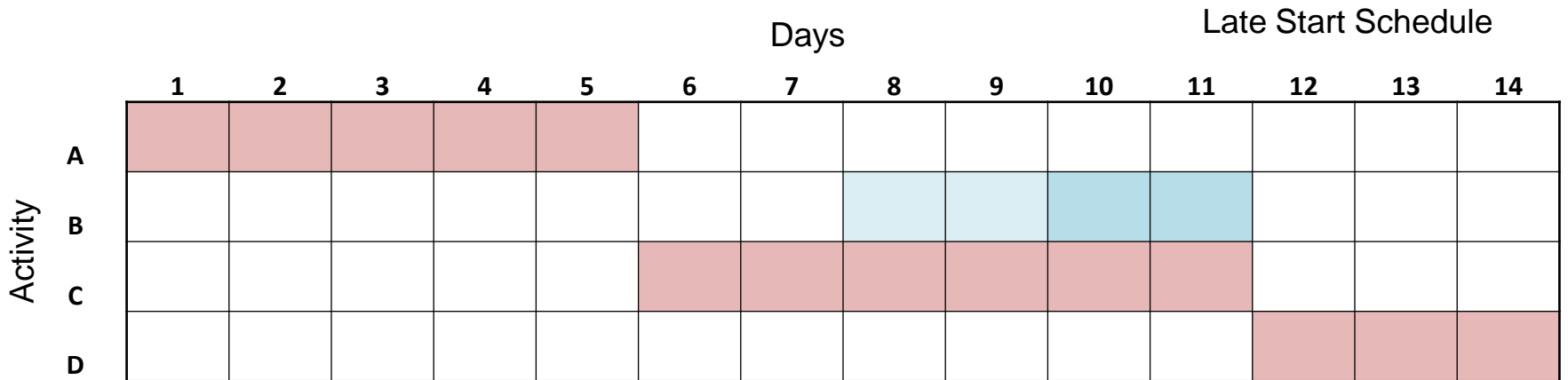
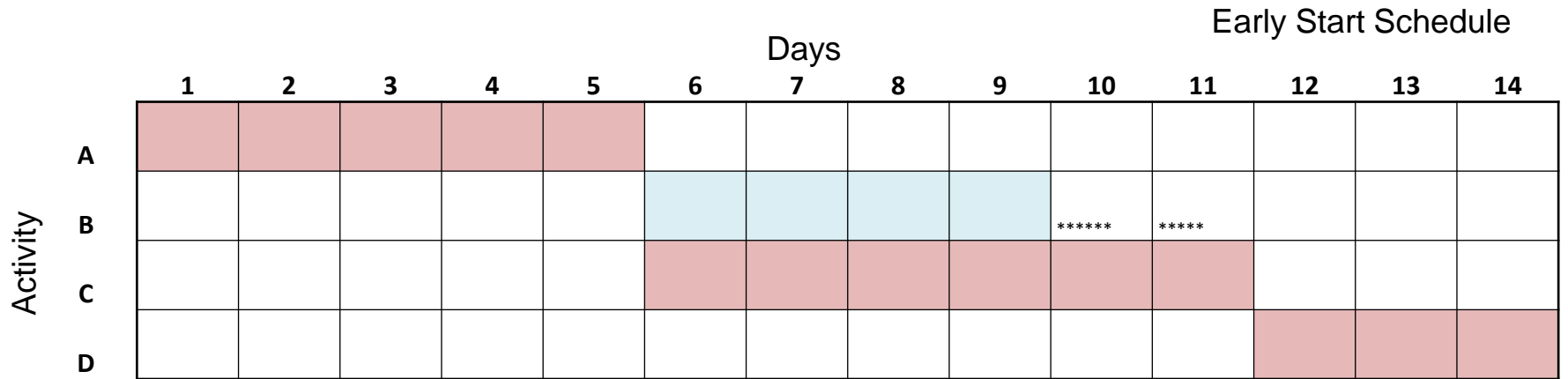
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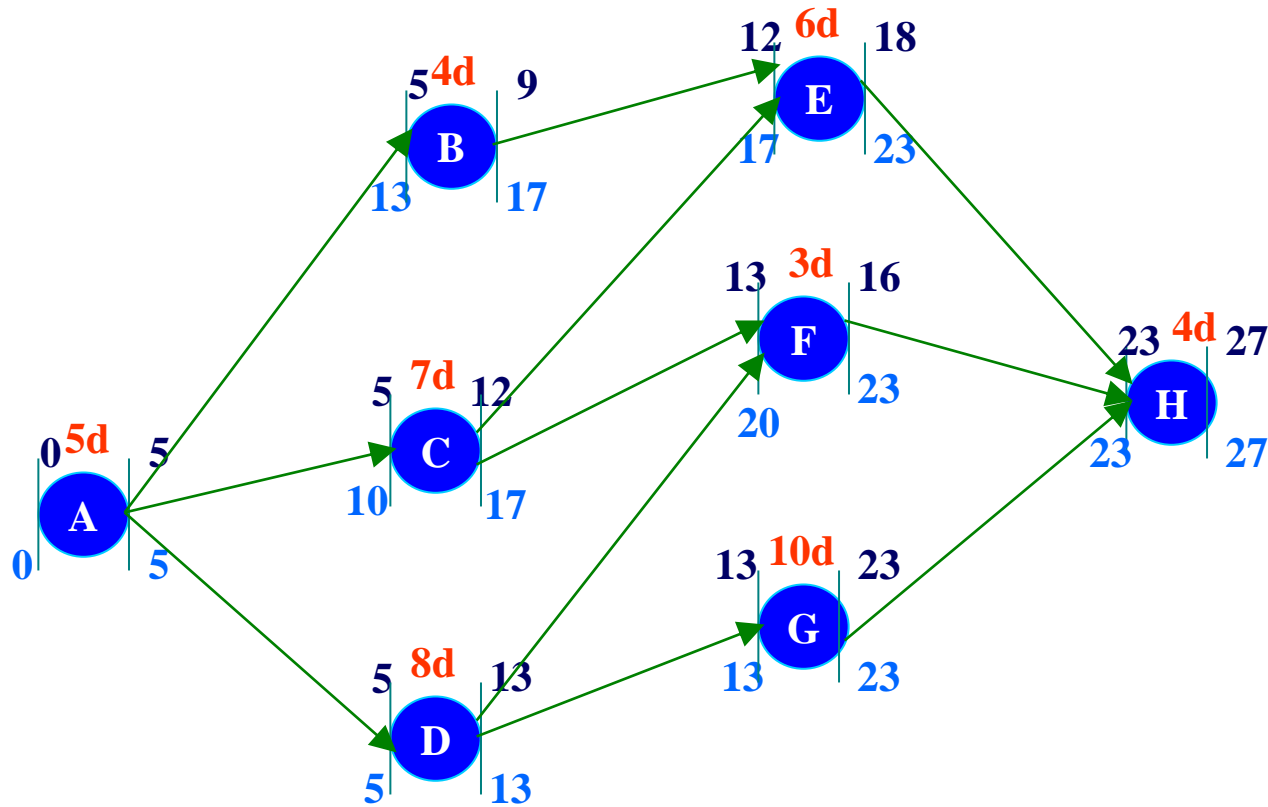
# Results in Gantt chart



# NETWORK ANALYSIS

## EXAMPLE-2

FORWARD PASS



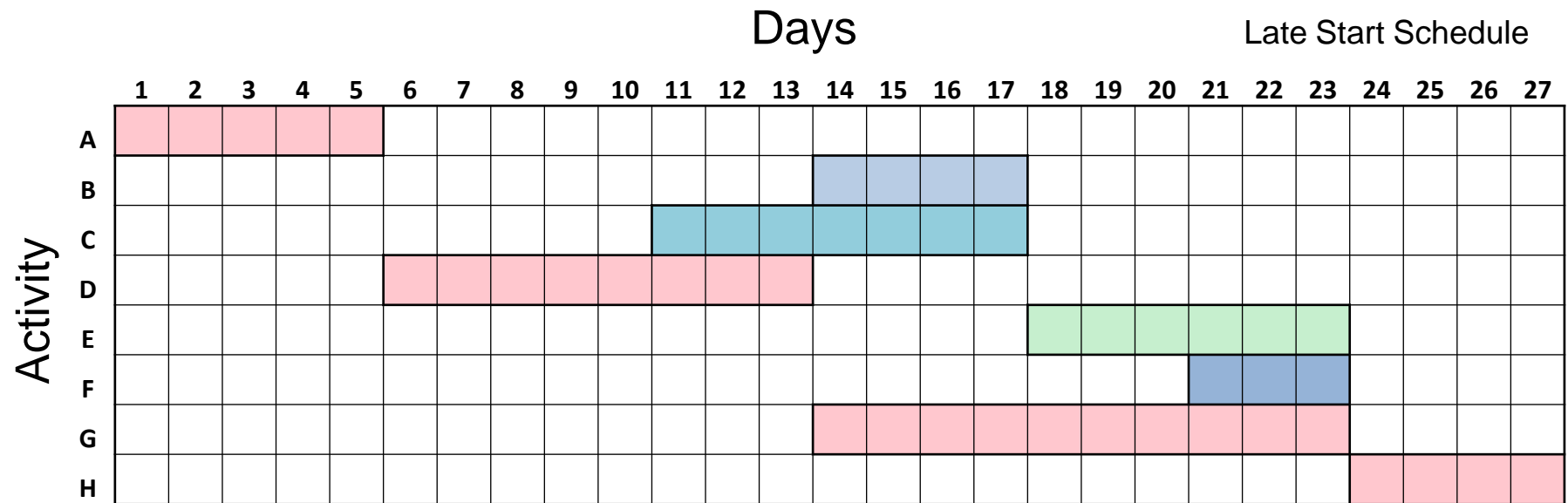
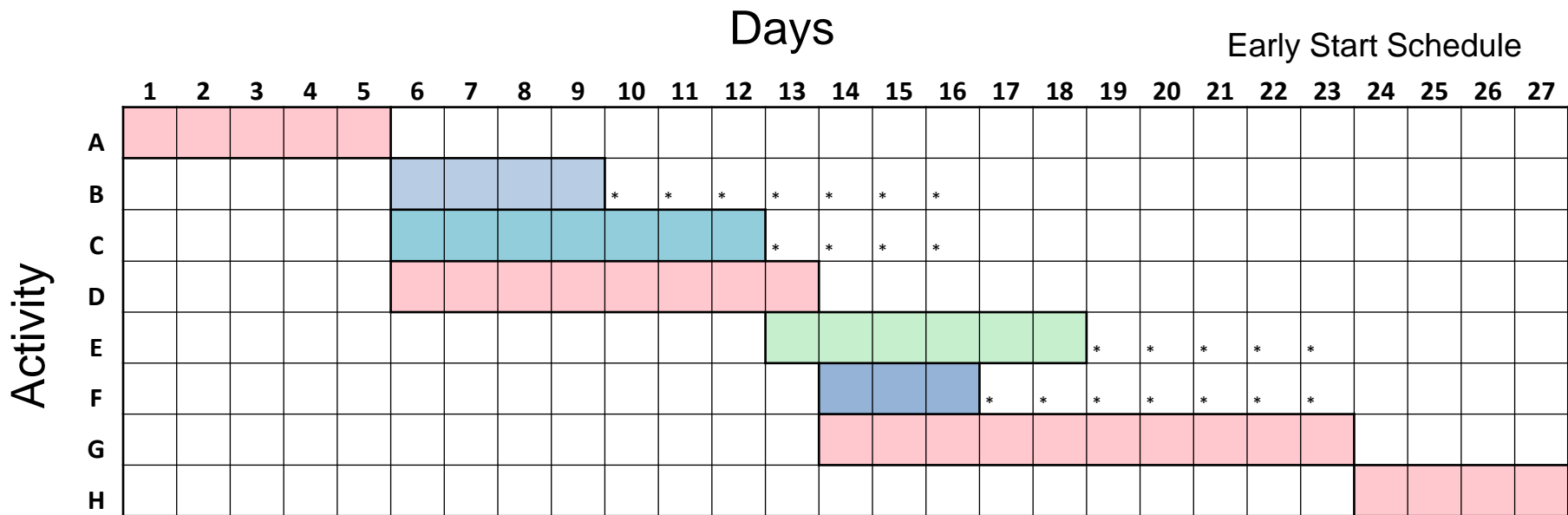
BACKWARD PASS

Activity	Duration	Predecessor
A	5	-
B	4	A
C	7	A
D	8	A
E	6	B,C
F	3	C,D
G	10	D
H	4	E,F,G

- Example -2 Result Summary

Activity	Duration	Predecessor	Early Start	Early Finish	Late Start	Late Finish	Critical
A	5	-	0	5	0	5	Y
B	4	A	5	9	13	17	N
C	7	A	5	12	10	17	N
D	8	A	5	13	5	13	Y
E	6	B,C	12	18	17	23	N
F	3	C,D	13	16	20	23	N
G	10	D	13	23	13	23	Y
H	4	E,F,G	23	27	23	27	Y

# Results in Gantt chart



# Mathematically....

FORWARD PASS



$$ES = \text{MAX (EF Preceding activities)}$$

$$EF = ES + \text{Duration}$$

BACKWARD PASS

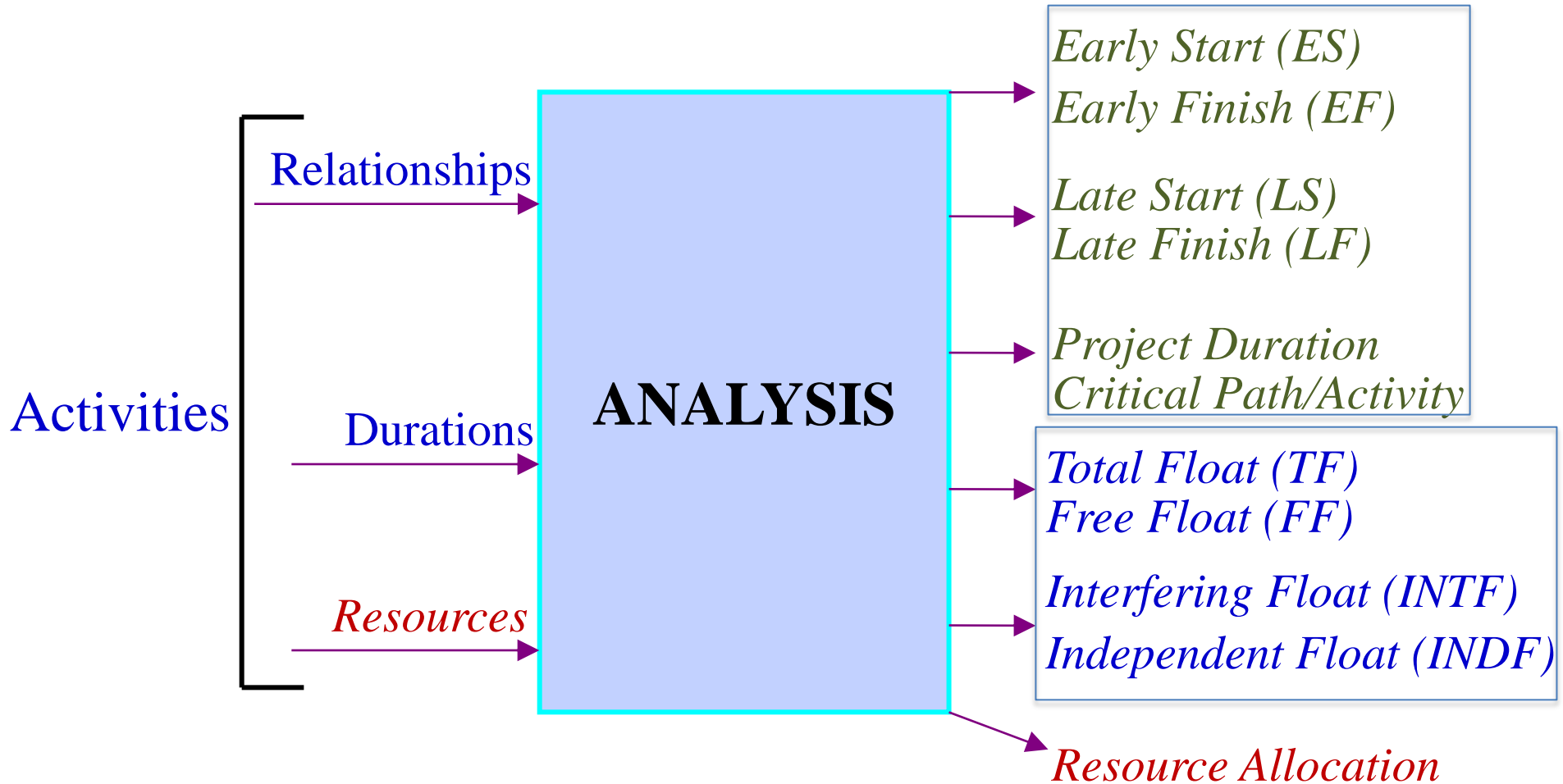


$$LF = \text{MIN (LS Following activities)}$$

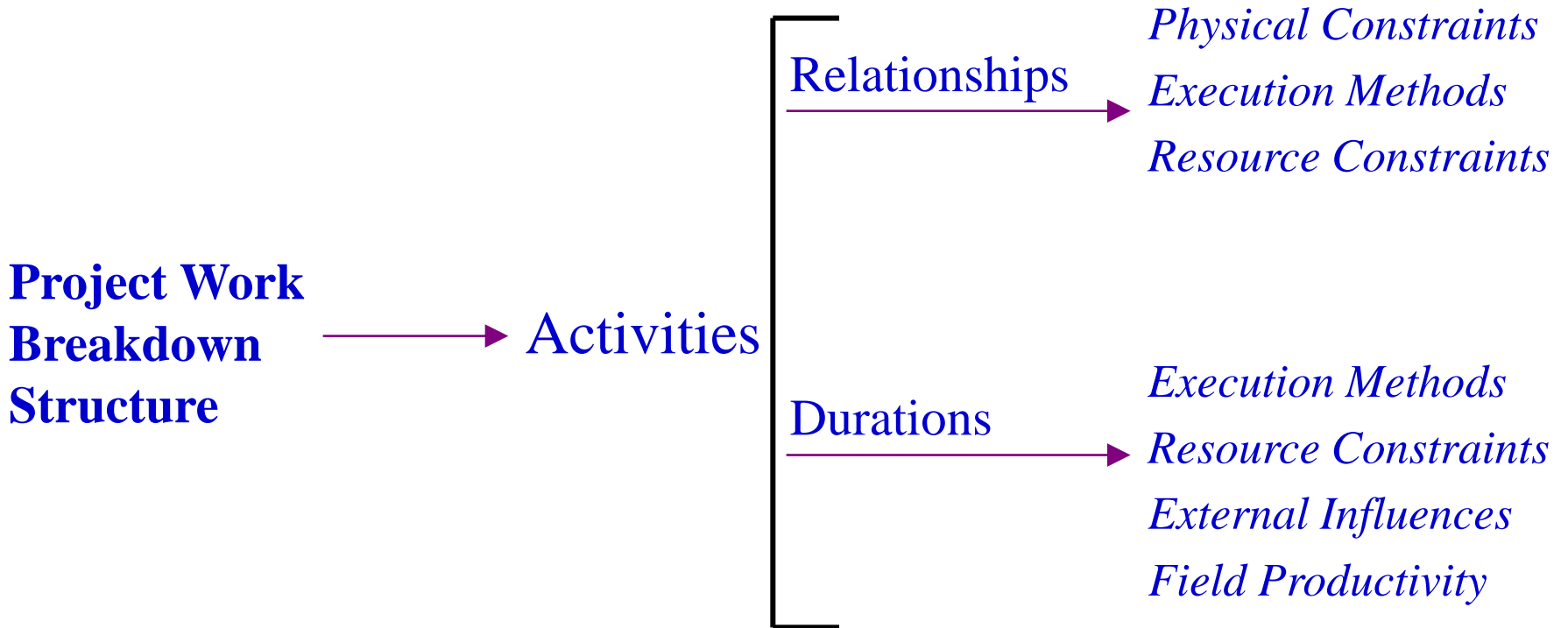
$$LS = LF - \text{Duration}$$

Critical Activity Identification ?

# Networks Analysis



# Network Inputs





# SUMMARY

## Network Representation

Types of Networks & Comparison

## Network Analysis

Forward Pass (ES,LS, Proj. Dur)

Backward Pass (EF,LF, Critical Activity)

Results in Gantt chart

Usage for Project Planning

**QUESTIONS ?**