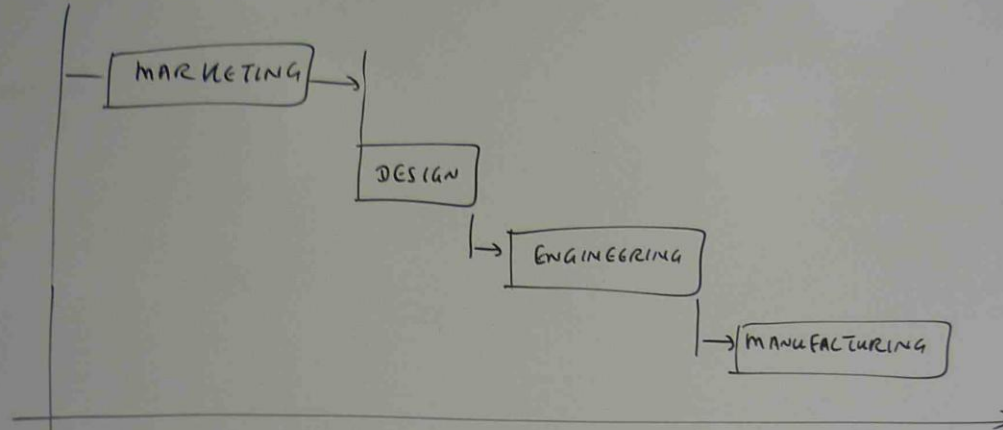
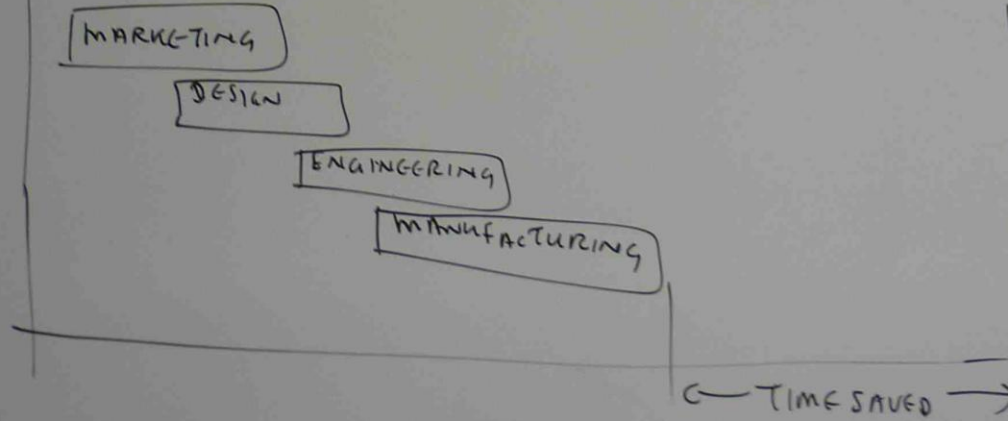
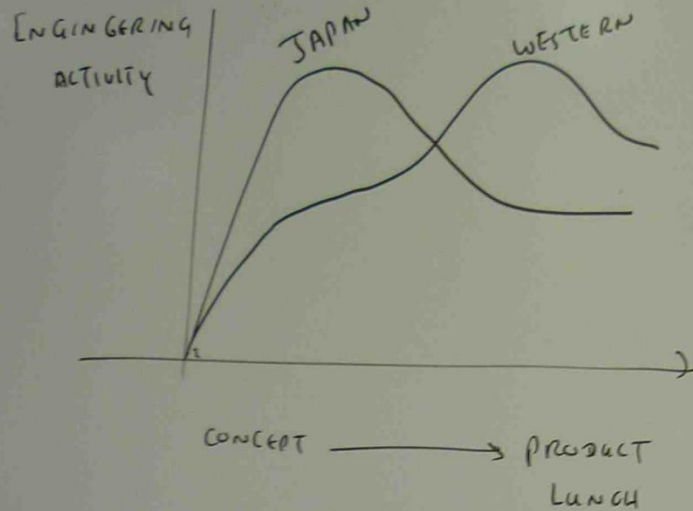


WESTERN APPROACH



JAPANESE APPROACH





JAPANESE SYSTEM

ALL MARKETING, ENGINEERING, PRODUCTION PROVIDE THE EFFORTS IN DESIGN CONCURRENTLY

ADVANTAGE

- REDUCED PRODUCT TIME
- REDUCED ENGINEERING
- BETTER RESPONSIVES TO

DISADVANTAGE

INCREASED OVER HE

WESTERN SYSTEM

HOW MARKETING DESCRIBE IT.

HOW ENGINEERING SAW IT. ← ENGINEERING CHANGES ARE DONE VERY LATE IN PROCESS → FACE CONSTRAINTS.

WHAT PRODUCTION PERFORMED

WHAT THE CUSTOMER WANTED

COST OF REL

- PEOPLE
- THEIR F
- TEAM
- WORK
- CULTURA

IN APPROPRIATE APPLICAT

WILL NOT CONCUR

## JAPANESE SYSTEM

ALL MARKETING, ENGINEERING, PRODUCTION

PROVIDE THE EFFORTS IN DESIGN CONCURRENTLY

→ NEW PRODUCT DESIGN MODEL

### ADVANTAGE

REDUCED PRODUCT TIME TO MARKET

REDUCED ENGINEERING COST

BETTER RESPONSIVES TO MARKET NEED

### DISADVANTAGE

INCREASED OVER HEAD - EACH TEAM REQUIRES OWN ADMINISTRATIVE SUPPORT

→ ENGINEERING CHANGES ARE DONE VERY LATE IN PROCESS

↔ FACE CONSTRAINTS.

### COST OF RELOCATION

PEOPLE BEING RELOCATED AWAY FROM THEIR FUNCTIONS TO BE WITH THE TEAM WITH WHICH THEY ARE WORKING

CULTURAL RESISTANCE

IN APPROPRIATE APPLICATION - POOR CONCEPTUAL DESIGN

WILL NOT BE IMPROVED BY USING CONCURRENT METHOD.

## GATE C

GATE	NEED
0	SHOULD THIS STR
1	SHOULD WITH STR

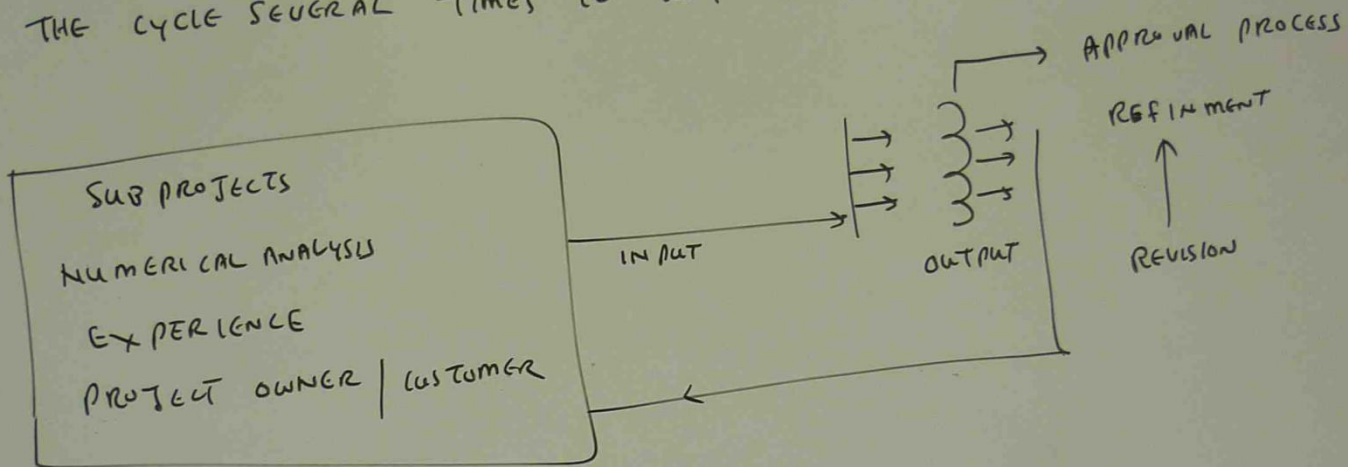
## GATE CRITERIA

GATE	KEY QUESTION	ANALYSIS
0	SHOULD WE LAUNCH THIS PROJECT?	MARKET ANALYSIS REPORT PRELIMINARY FUNDING REQUIREMENT MANUFACTURING ASSESSMENT
1	SHOULD WE PROCEED WITH THE DESIGN STRATEGY?	APPROVED PRODUCT SPECIFICATION FIELD INTRODUCTION REQUIREMENT PROTOTYPE MANUFACTURABILITY

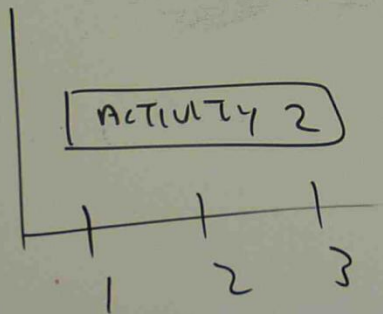


# MODELLING THE PROJECT SYSTEM - DETAILED MODEL

THE GENERAL APPROACH TO PLANNING INVOLVES STARTING WITH A ROUGH OVERVIEW AND CONDUCTING REVISIONS OF THIS THROUGH PROCESS CALLED ITERATIVE. IT INVOLVES GOING THROUGH THE CYCLE SEVERAL TIMES TO TEST THE EFFECT OF CHANGE



## PLANNING SEQUENCE



ACTIVITY	FINISH
START	2/2/10
↓	↓
END	2/11/10

## PROJECT PLAN / GRAPHICAL FORM

CARRY OUT LITERATURE REVIEW	xxxx							
ARRANGE TASKS		xx						
PREPARE QUESTIONNAIRES			xxx					
REVIEW QUESTIONNAIRES				xxxx				
DELIVER QUESTIONNAIRES					xxxx			
ANALYZE RESULTS						x		
WRITE UP							x	
HAND IN DATE								x

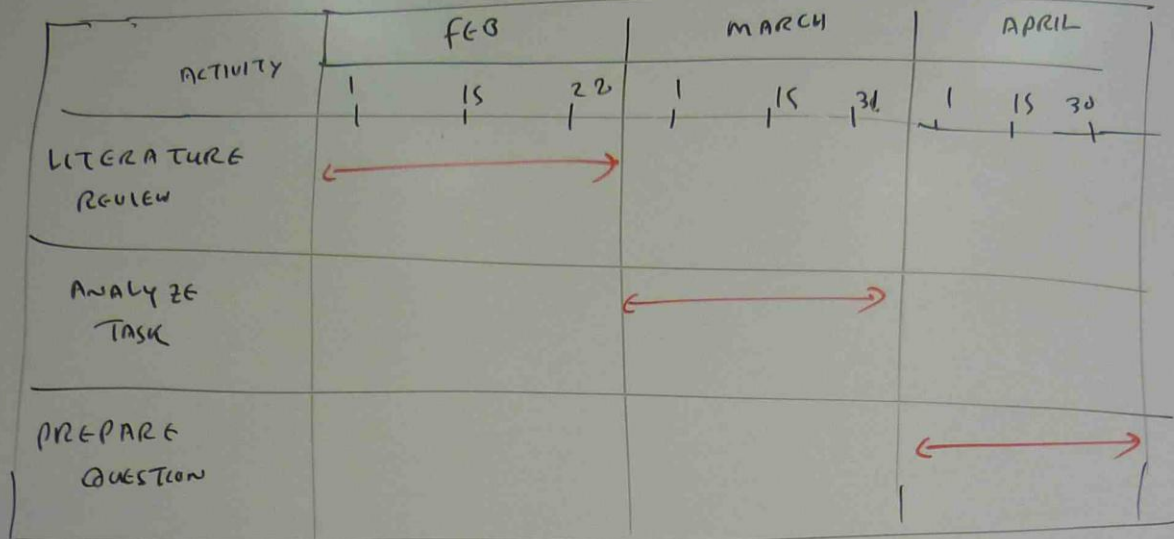
### FORWARD SCHEDULE

START THE ACTIVITIES AT A GIVEN DATE AND FOLLOW THEM FORWARD ON TIME TO DETERMINE THE END DATE.

### BACKWARD SCHEDULE

LOOK AT THE TIME BY WHICH THE PROJECT IS NEEDED TO BE COMPLETED AND WORK OUT THE LOGIC OF ACTIVITIES BACKWARD.

## GANTT CHART



### GANTT CHART FOR SIMPLE PROJECT

- THE NUMBER OF ACTIVITIES AND RESOURCES IS LOW
- THE ENVIRONMENT IS FAIRLY STATIC
- THE PERIODS ARE RELATIVELY LONG DAYS AND WEEKS RATHER THAN HOUR.

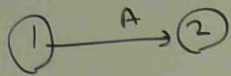
## GANNT CHART SUMMARY

GOOD POINT	LIMITATION
<ul style="list-style-type: none"><li>- SIMPLE TO DRAW AND READ</li><li>- GOOD FOR STATIC ENVIRONMENT</li></ul>	<ul style="list-style-type: none"><li>- DIFFICULT TO UPDATE WHERE THERE ARE MANY CHANGES</li><li>- CHART CAN QUICKLY BECOME OBSOLETE AND THEREFORE DISCREDITED</li></ul>
<ul style="list-style-type: none"><li>- VERY WIDELY USED</li><li>- THE BASIS OF GRAPHICAL INTERFACE FOR MOST PC SOFTWARE</li></ul>	<ul style="list-style-type: none"><li>- DOES NOT EQUATE TIME WITH COST</li><li>- DOES NOT HELP IN OPTIMIZING RESOURCES ALLOCATION</li></ul>



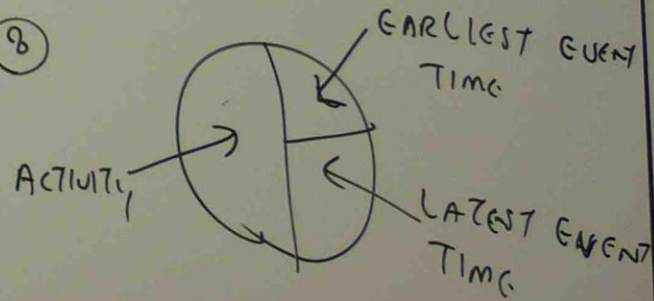
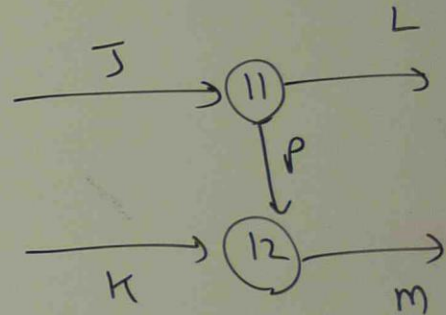
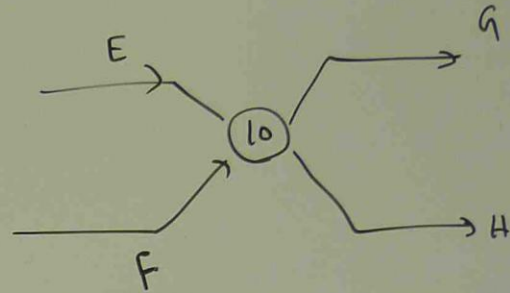
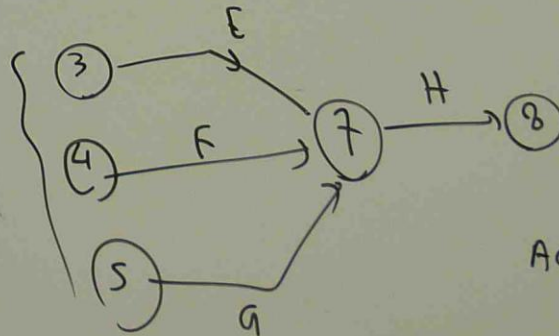
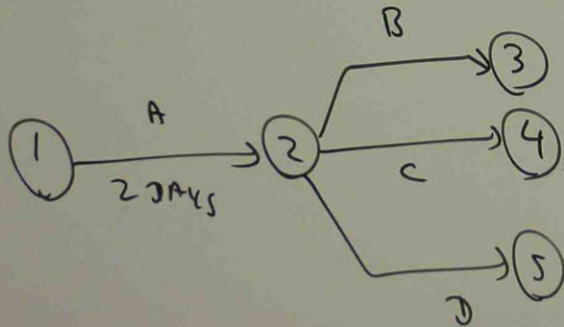
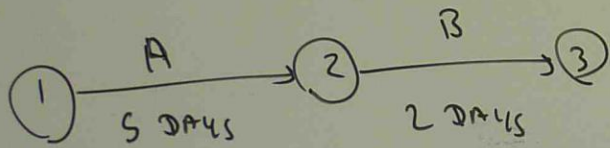
# ACTIVITY ON ARROW DIAGRAM

- AN ARROW — METHOD KNOWN AS ACTIVITY ON ARROW (AOA)
- A NODE — METHOD KNOWN AS ACTIVITY ON NODE (AON)

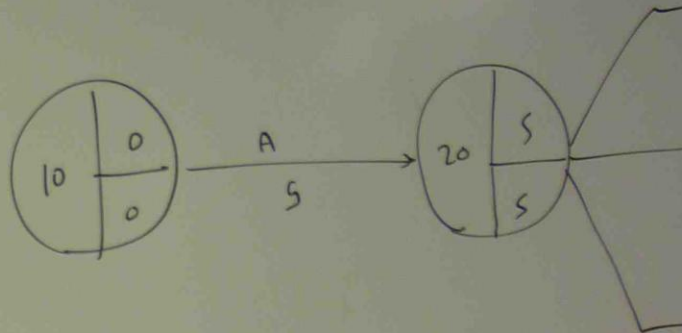


## PLANNING SEQUENCE

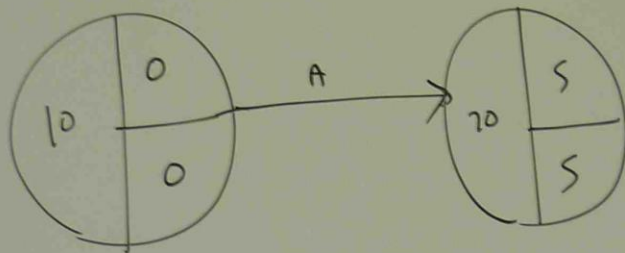
- IDENTIFY CONSTITUENT ACTIVITIES
- DETERMINE THEIR SEQUENCES
- ESTIMATE THE TIME FOR EACH



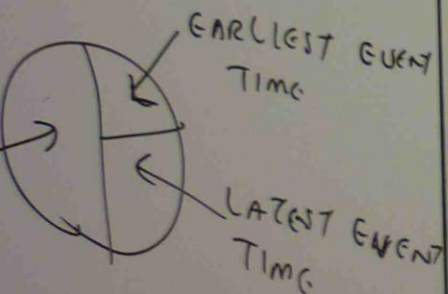
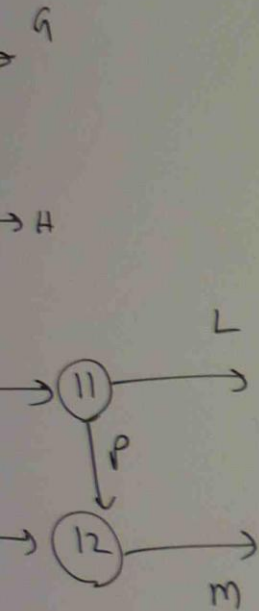
ACTIVITY CODE	ACTIVITY
10	DISMANTLING
20	TESTING

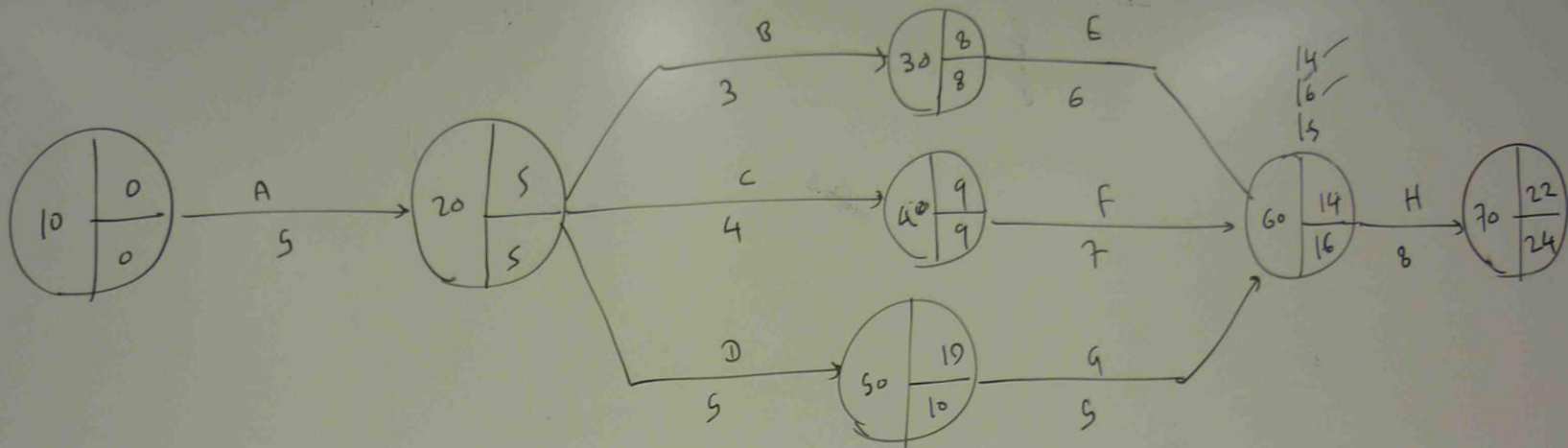


→ ACTIVITY LABEL  
DIRECTION



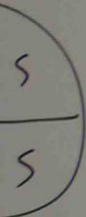
WHEN THERE ARE MORE THAN ONE  
ACTIVITIES LEAVING FROM AN  
EVENT POINT, THE EARLIEST  
START TIME OF THE LATEST  
ACTIVITY LEAVING FROM THAT  
POINT IS THE EARLIEST  
START TIME OF THE EVENT  
POINT. THIS IS DETERMINED  
AS ABOVE.



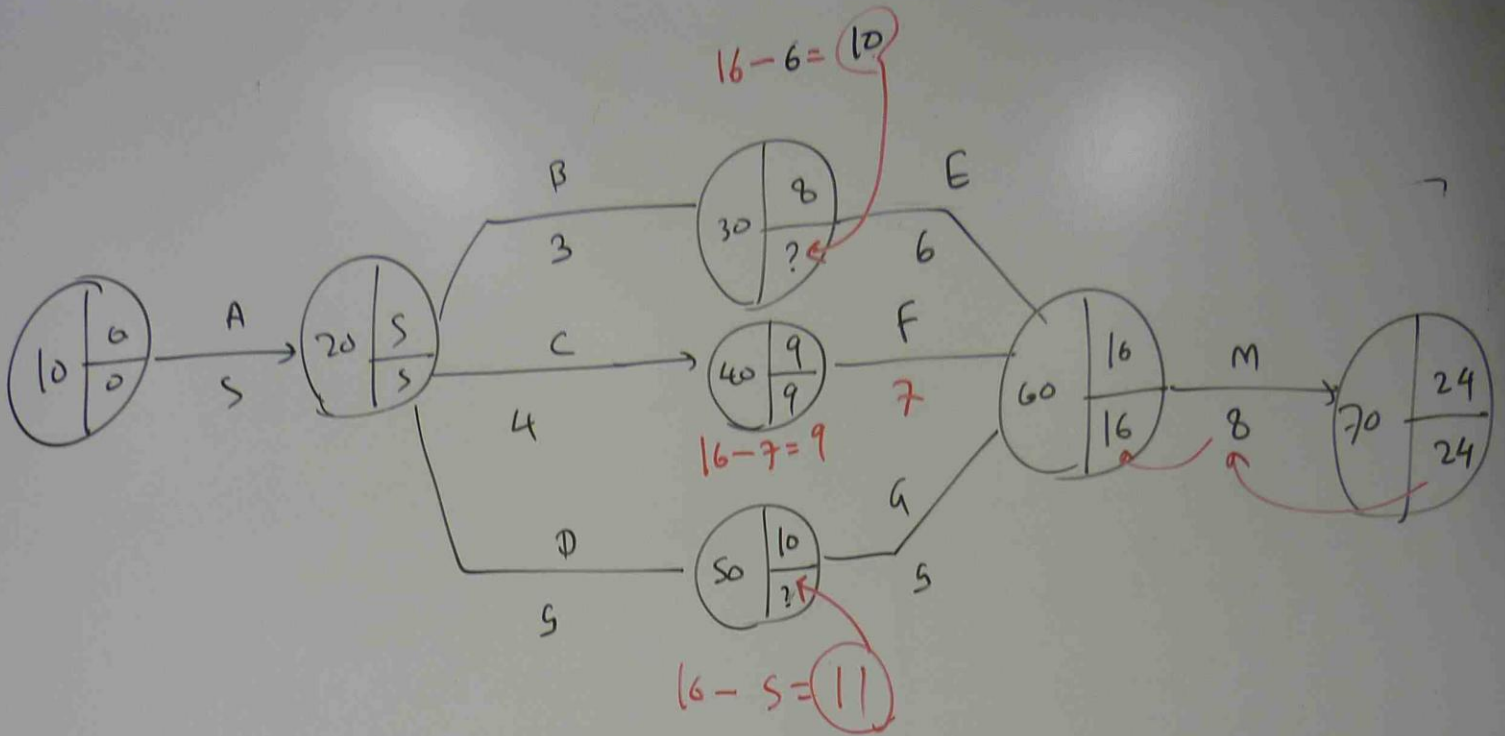
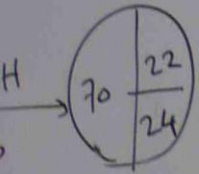


WHEN THERE ARE MORE THAN ONE ACTIVITIES MEET AT A CERTAIN POINT, THE EARLIEST COMPLETION AND LATEST COMPLETION TIME CAN BE DETERMINED AS ABOVE.

LABEL  
10W



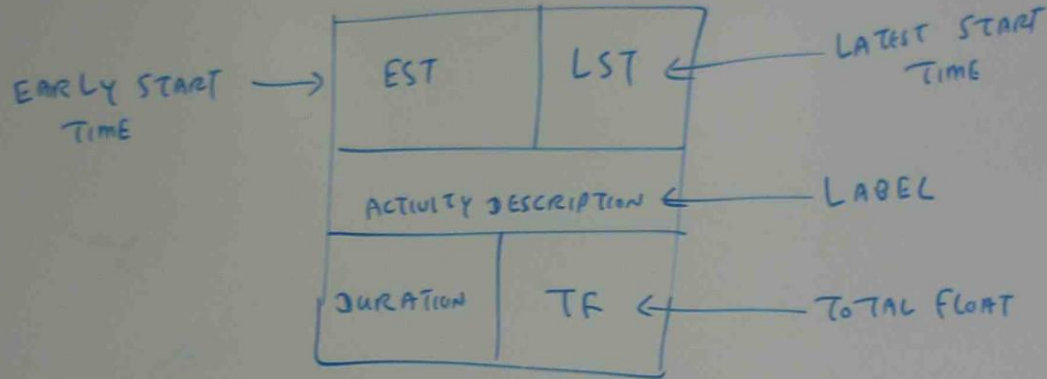




BACKWARD SCHEDULE



## ACTIVITY ON NODE (AON) PROGRAMMING



## LINKING ACTIVITY

WAY

FINISH TO START

START TO START

FINISH TO FINISH

START TO FINISH

