Tutorial 6
CPM

1. A project has been defined to contain the following list of activities along with their required times for completion:

Activity No	Activity	Expected completion time (days)	Dependency
A	Requirements collection	5	-
B	Screen design	6	A
C	Report design	7	A
D	Database design	2	B,C
E	User documentation	6	D
F	Programming	5	D
G	Testing	3	F
H	Installation	1	E,G

Draw a project network diagram using CPM and derive its critical path.

2. The activities and their estimated durations of a project are shown below.

Activity	Immediate Predecessor	Time (in weeks)
A	-	5
B	-	6
C	A	3
D	B	3
E	-	7
F	C, D, E	4

Draw a project network diagram and find the critical tasks.

3. Piccadily College is considering building a new multipurpose athletic complex on campus. The complex would provide a new gymnasium for intercollegiate basketball games, expanded office space, classrooms, and intramural facilities. The activities that would have to be undertaken before beginning constructing are shown below.

Activity	Description	Immediate predecessor	Time (weeks)
A	Survey building site	-	6
B	Develop initial design	-	8
C	Obtain board approval	A, B	12
D	Select architect	C	4
E	Establish budget	C	6
F	Finalise design	D, E	15
G	Obtain financing	E	12
H	Hire contractor	F, G	8

Develop a network diagram for this project and identify the critical tasks.