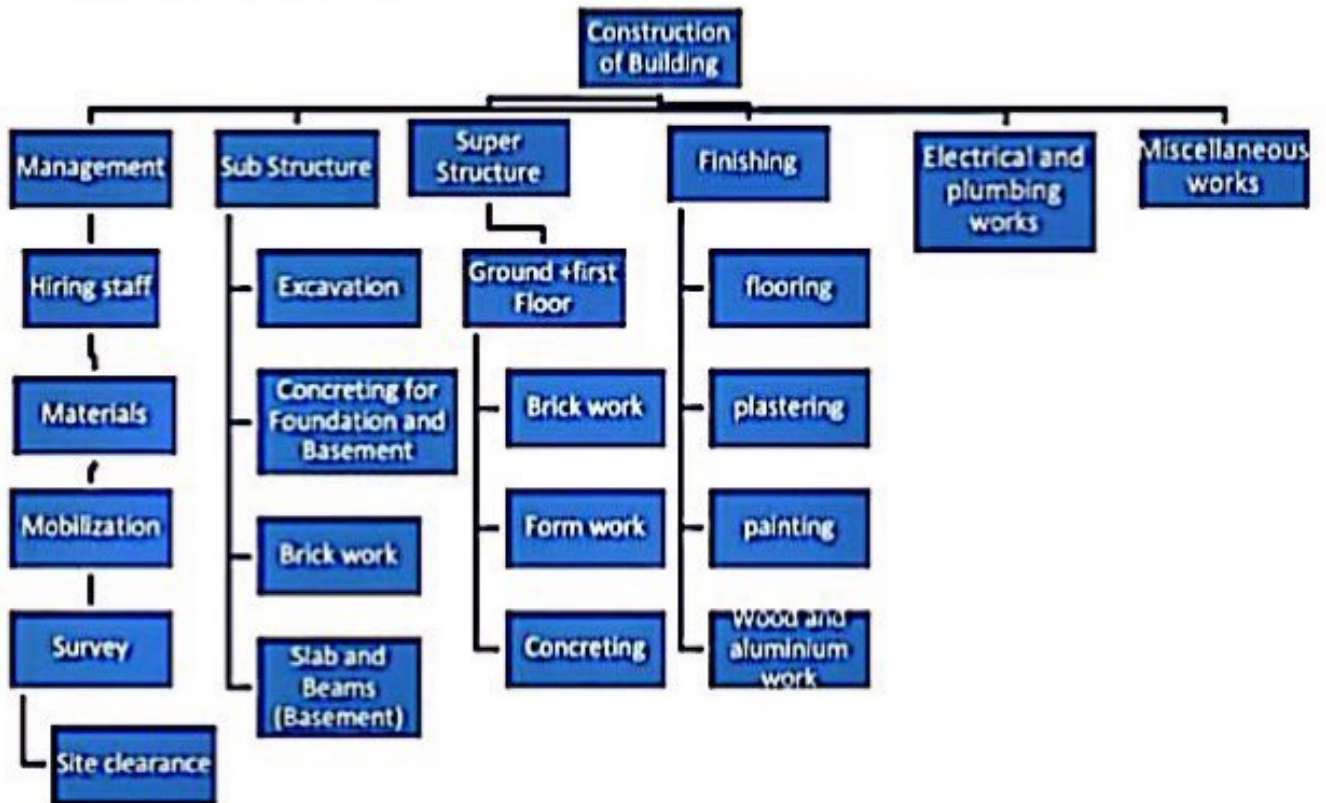


Name	Mansoor Rashid
ID	7698
Section	A
Semester	8th
Subject	Construction Management
Instructor	Engr: Muhammad Zeeshan Ahad

### A Activity List of a two story building.

- ① Survey
- ② Mobilization
- ③ Clearing of site
- ④ Layout and Excavation
- ⑤ foundation and Columns
- ⑥ Brick masonry Walls
- ⑦ Formwork
- ⑧ Concreting (Beam and Slab)
- ⑨ Curing
- ⑩ Flooring

## Work Breakdown structure of building



①

B

Friday is holiday.

Task Mode	Task Name	(In days) Duration	Start	Finish
1	Initial survey	2	18-APR 2020	19-APR 2020
2	Mobilization	3	20-APR	22-APR
3	Clearance and grubbing	2	23-APR	25-APR
4	detailed survey	2	26-APR	27-APR
5	Layout	1	28-APR	28-APR
6	Excavation	3	29-APR	2-May
7	Leveling and dressing	1	3-May	3-May
8	ant termite	1	4-May	4-May
<b>Foundation and Basement</b>				
9	Lean concrete	1	5-May	5-May
10	Steel Rebar for column Found	2	6-May	7-May
11	form work	2	9-May	10-May
12	concrete 1:2:4	2	11-May	12-May
13	Steel Rebar for column	5	13-May	18-May
14	column formwork basement	5	19-May	24-May
15	column concreting basement	6	25-May	31-May



Task Mode	Task Name	(In days) Duration	Start	Finish
16	Form work for beam/slab	8	1 June 2020	9 June 2020
17	Steel cutting and placing	5	10 June	15-June
18	Electrical pipe distribution	2	10 June	11 June
19	concret 1:2:4 Slab and Beam	1	12-June	12-June
20	form removal	2	18-June	17-June
21	brick masonry	30	18-June	22-July
22	electrical and plumbing pipe-D	10	23-July	3-Aug
23	plastering	20	23-July	15-Aug
24	Curing	<del>28</del> 14	16-Aug	31-Aug
25	ceiling	10	1-sep	12-sep
26	painting	20	1-sep	22-sep
27	sanitation work	5	22- <del>10</del> Sep	27-sep
28	floor concreting	7	28-sep	5-oct
29	tile and marble	130	8-oct	22-oct
30	woodworks	30	6-oct	9-Nov
31	electrical wire distribution	3	10-Nov	12-Nov

Task Mode	Task Name	(Days) Duration	Start	Finish
32	Sanitary fixture <b>Ground Floor</b>	3	14-Nov 2020	16-Nov 2020
33	Layout	1	17-Nov	17-Nov
34	steel cutting and placing	2	18-Nov	19-Nov
35	formwork	5	21-Nov	25-Nov
36	Concreting for column	4	26-Nov 2020	30-Nov 2020
37	formwork for beam & slab	8	1-dec	9-dec
38	steel cutting and placing	7	10-dec	17-dec
39	Electrical pipe distribution	2	10-dec	12-dec
40	Concrete 1:2:4 Slab Beam	1	13-dec 2020	13-dec 2020
41	form removal	2	<del>12</del> -jan 2021	3-jan 2021
42	brick masonry	15	4-jan	19-Jan
43	electrical and plumbing pipe <sup>D</sup>	5	20-jan	25-jan
44	Plastering	15	26-jan	11-feb
45	Curing	<del>13</del> 14	13-jan	18-Jan
46	ceiling	5	<del>19</del> -Jan 20 Feb	25 feb



Task Mode	Task Name	Duration	Start	Finish
47	painting	15	<del>18-Jan 2021</del> 18-Jan 2021	<del>3-Feb</del> 3-Feb 2021
48	sanitation work	3	<del>19-Jan</del> 19-Jan	<del>21-Jan</del> 21-Jan
49	floor concreting	3	<del>26-Feb</del> 26-Feb	<del>28-Feb</del> 28-Feb
50	tiles and marbles	15	<del>1-March</del> 1-March	17-Mar
51	wood work	20	18-Mar	10-Apr
52	electrical wire distribution	5	11-Apr	15-Apr
53	sanitary fixtures	5	17-Apr 2021	21-Apr 2021
<b>Frist floor</b>				
54	Layout	1	13-dec 2020	13-dec 2020
55	steel cutting and placing <sup>for</sup> columns	5	14-dec	19-dec
56	formwork	7	18-dec	20-dec
57	concreting for column	7	21-dec	28-dec
58	form work for beam slab	10	29-dec	9-Jan
59	steel cutting and placing	7	10-Jan 2021	17-Jan 2021
60	Electrical pipes distribution	2	10-Jan	11-Jan
61	Concrete 1: 2:4 slab and	1	12-Jan	12-Jan

Task Mode	Task Name	Duration	Start	Finish
62	form removal	2	18-Jan 2021	19-Jan 2021
63	brick masonry	10	<del>17</del> 20-Jan	31-Jan
64	electrical and plumbing pipe <sup>dist</sup>	5	20-Jan	25-Jan
65	plastering	15	20-Jan	6-Feb
66	curing	<del>10</del> 14	21-Jan	6-Feb
67	ceiling	7	7-Feb	14-Feb
68	painting	15	7-Feb	23-Feb
69	sanitation work	5	9-Feb	14-Feb
70	floor concreting	5	24-Feb	1-March
71	tiles and marbles	20	2-March	24-March
72	wood works	20	2-March	24-Mar
73	electrical wire dist	5	3-March	8-March
74	Sanitary fixture	5	9-March	14-March



Task Mode	Task Name	Duration	Start	Finish
	Exterior work and Boundary wall			
75	Layout	2	5-May 2020	6-May 2020
76	Excavation	4	7-May	11-May
77	Leveling and dressing	2	12-May	13-May
78	anti termite	1	14-May	14-May
79	Lean concrete	3	16-May	18-May
80	brick masonry	7	19-May	26-May
81	dpf	2	27-May	28-May
	<del>brick masonry</del>			
82	plastering	7	30-May	6-June
83	painting	5	7-June	11-June



# (Q No 3) Critical path Method of the projects

Activity		Predecessors	Duration in week
Survey	A		1
Mobilization	B		1
Grabbing of site	C	A	1
Layout and Exec	D	C	2
Formwork	E	D	2
Foundation and column	F	E	3
Concreting (Beams and columns)	G	F	3
Brick work	H	F	3
Plumbing and Sanitary work	I	G, H	2
Electrification	J	G, H	2
Finishing	K	I, J	3
Flooring	L	K	2
Woodwork	M	K, L	3
Miscellaneous	N		3

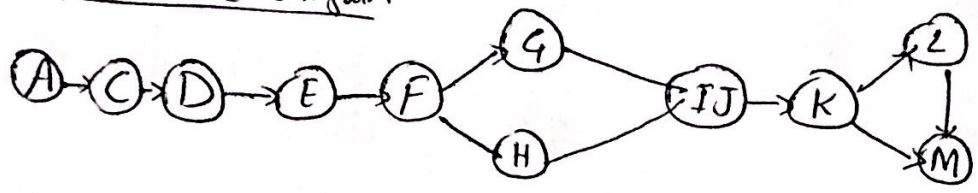
There are two paths of our project A and B.

path A = (ACDEFGIJKLM) having 26 weeks

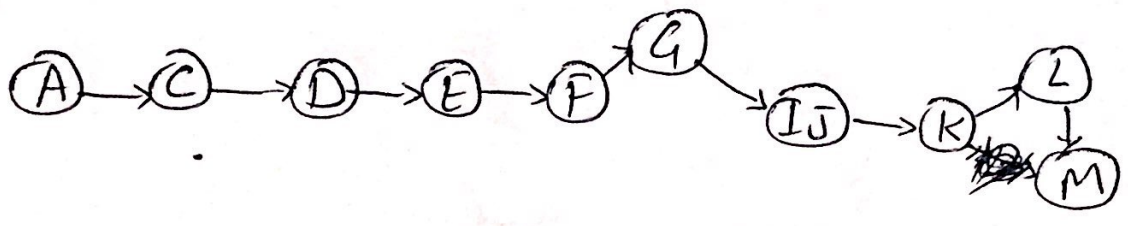
path B = (ACDEFHIJKM) having 24 weeks

So critical path of our project is A with has more time.

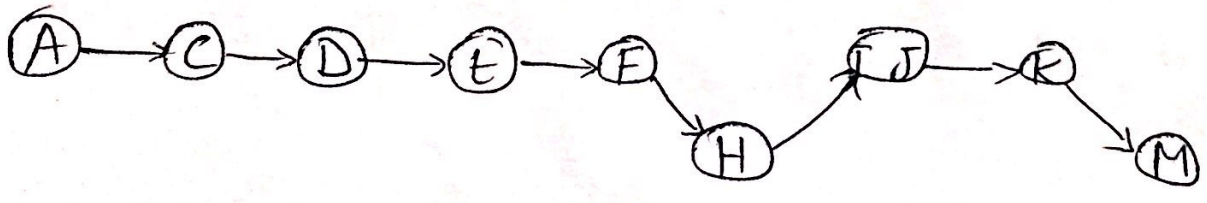
Precedence diagram



Path A



Path B





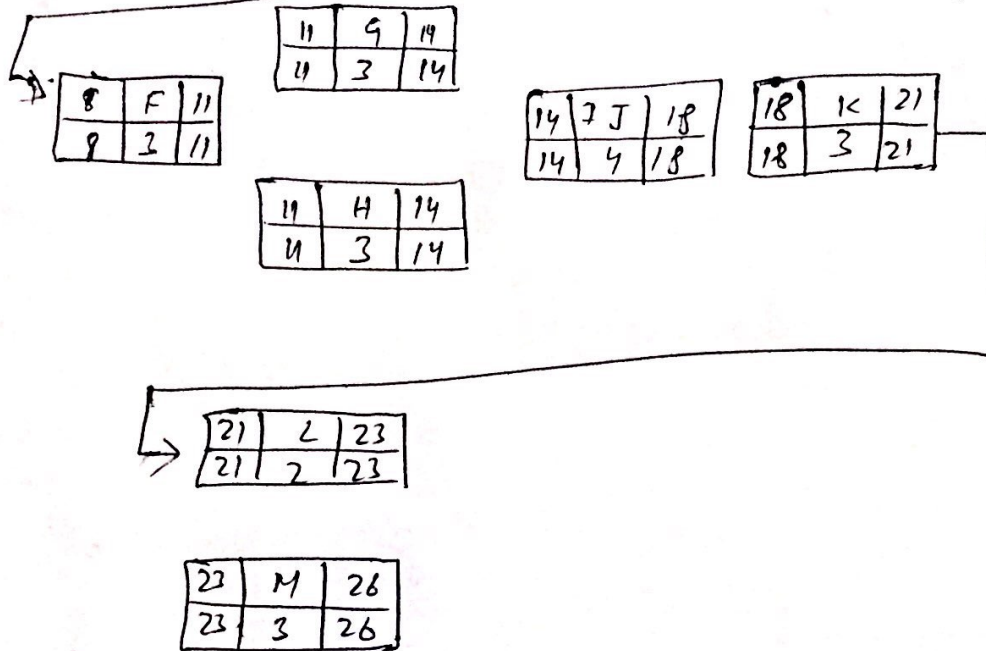
Q=4 provide maximum time take by project.

0	A	1
0	1	1

1	C	2
1	1	2

2	D	4
2	2	4

4	E	8
4	4	8



As according to forward pass and backward pass maximum time for our project is 26 weeks.

Q5 provide Slack time for activities if any

$$\text{Slack} = \text{Late finish} - \text{early finish}$$

$$A = 1 - 1 = 0$$

$$C = 2 - 2 = 0$$

$$D = 4 - 4 = 0$$

$$E = 8 - 8 = 0$$

So all value comes zero no slack

$$\text{Slack} = \text{Late start} - \text{early finish}$$

$$A = 0 - 0 = 0$$

$$C = 1 - 1 = 0$$

$$D = 2 - 2 = 0$$

$$E = 4 - 4 = 0$$

all value is zero so no slack