

Software Engineering Lab Exam (ESC-591)

Name: Sayan Kundu

Roll: 067

Semester: 5th

Year: 3rd

10>

A. Consider the following activities with their durations:

a) T1 (10 days)

b) T2 (10 days)

c) T3 (20 days)

d) T4 (50 days)

e) T5 (60 days)

f) T6 (40 days)

g) T7 (45 days)

The following precedence relations hold among the tasks:

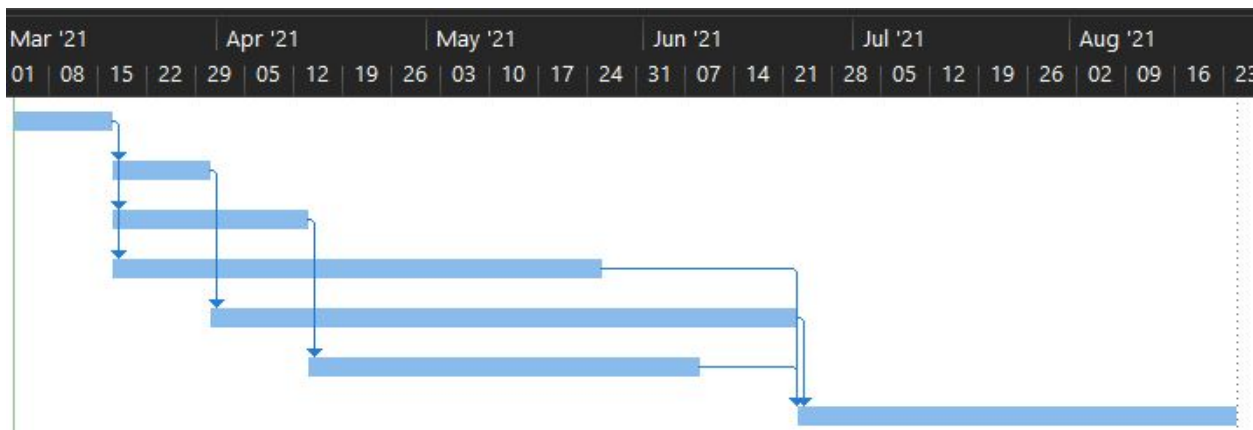
a<{b,c,d}; {b<e}; c<f; {d,e,f}<g.

Find out the following time parameter for each job: ES, LS, EF, LF, ST & MT for the project. Draw the Activity Network Diagram.

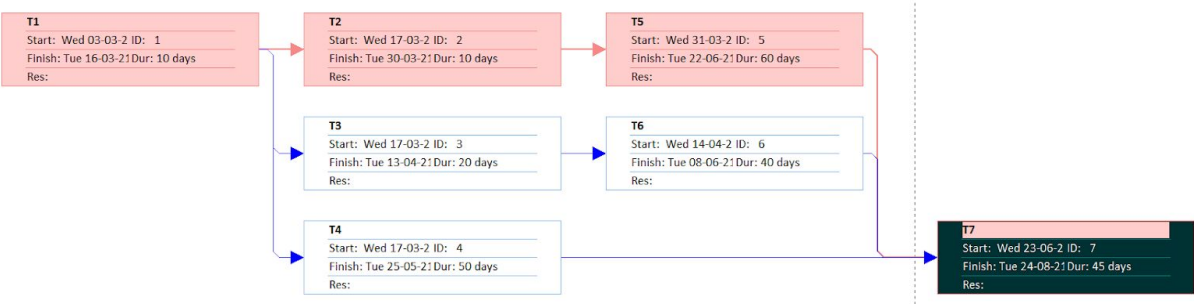
Entry Table:

Task Nam	Duration	Start	Finish	Predecessors	Early Start	Early Finish	Late Start	Late Finish	Total Slack
T1	10 days	Wed 03-03-21	Tue 16-03-21		Wed 03-03-21	Tue 16-03-21	Wed 03-03-21	Tue 16-03-21	0 days
T2	10 days	Wed 17-03-21	Tue 30-03-21	1	Wed 17-03-21	Tue 30-03-21	Wed 17-03-21	Tue 30-03-21	0 days
T3	20 days	Wed 17-03-21	Tue 13-04-21	1	Wed 17-03-21	Tue 13-04-21	Wed 31-03-21	Tue 27-04-21	10 days
T4	50 days	Wed 17-03-21	Tue 25-05-21	1	Wed 17-03-21	Tue 25-05-21	Wed 14-04-21	Tue 22-06-21	20 days
T5	60 days	Wed 31-03-21	Tue 22-06-21	2	Wed 31-03-21	Tue 22-06-21	Wed 31-03-21	Tue 22-06-21	0 days
T6	40 days	Wed 14-04-21	Tue 08-06-21	3	Wed 14-04-21	Tue 08-06-21	Wed 28-04-21	Tue 22-06-21	10 days
T7	45 days	Wed 23-06-21	Tue 24-08-21	4,5,6	Wed 23-06-21	Tue 24-08-21	Wed 23-06-21	Tue 24-08-21	0 days

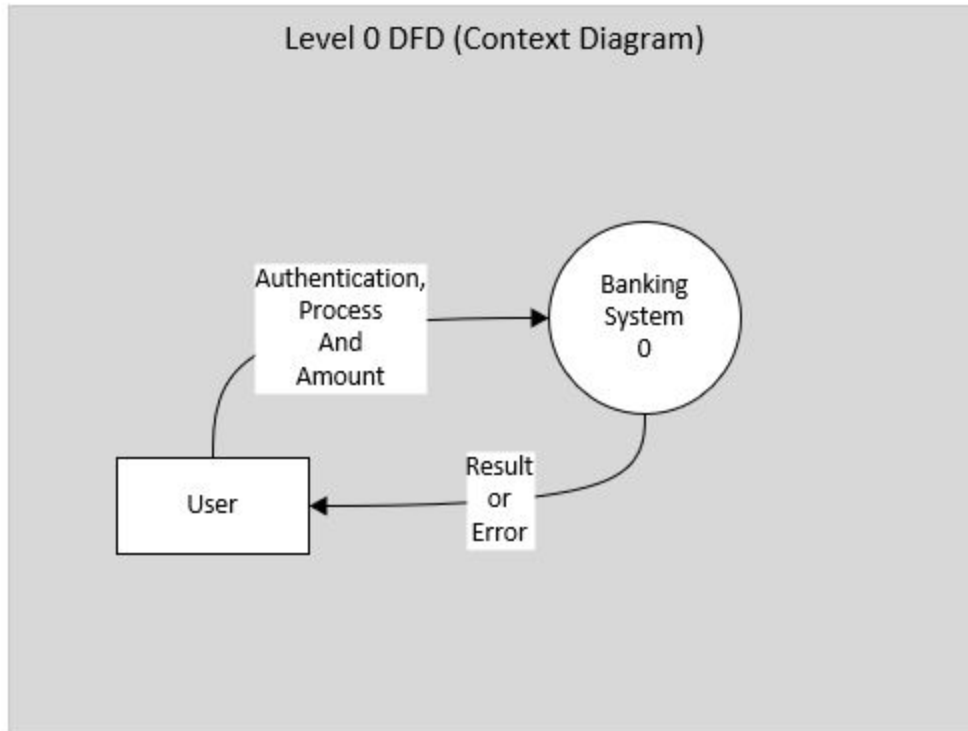
Gantt Chart:



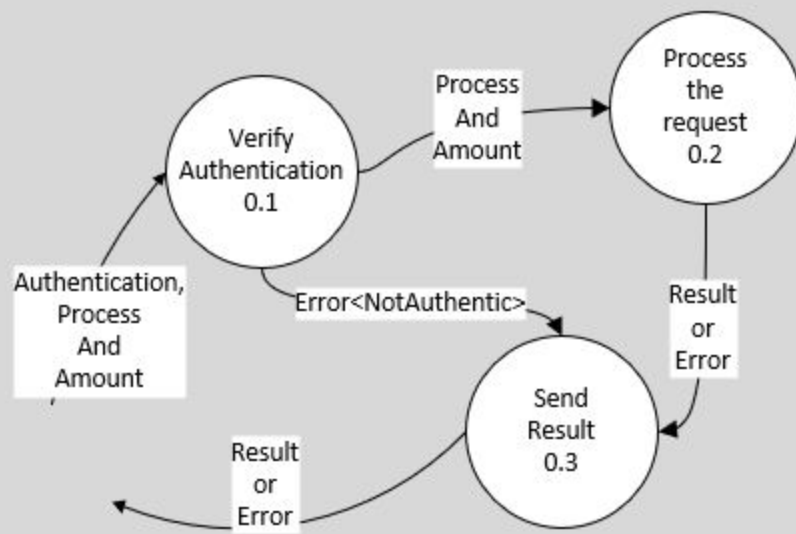
Activity Network Diagram:



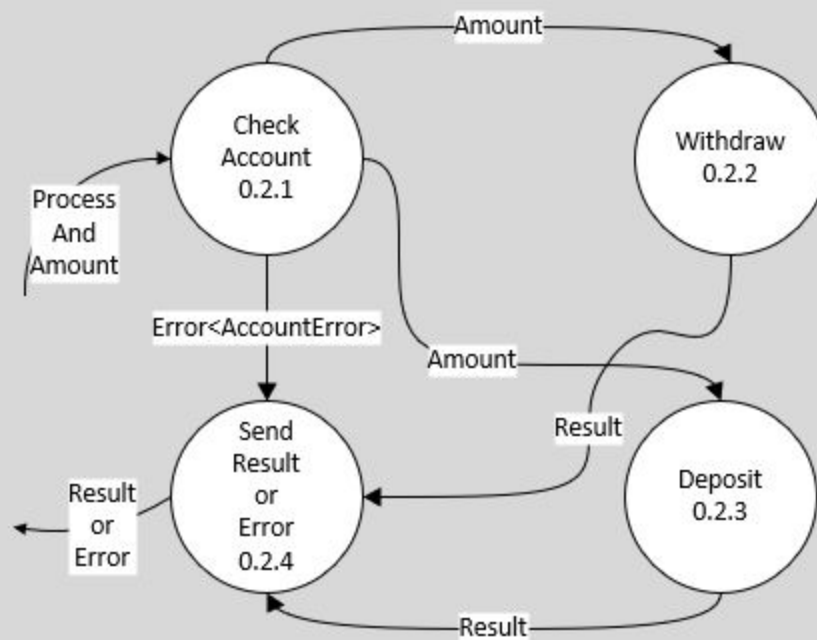
B. Draw a data flow diagram(DFD) of a banking system.



Level 1 DFD



Level 2 DFD



Hand Written Solutions:

Software Engineering Lab (ESC-591) Exam

Name: Sajan Konde

Roll: 067

Semester: 5th

Year: 3rd

10) a) Consider the following activities with their durations:

- a) T1 (10 days)
- b) T2 (10 days)
- c) T3 (20 days)
- d) T4 (50 days)
- e) T5 (60 days)
- f) T6 (40 days)
- g) T7 (45 days)

The following precedence relations hold among the tasks:
 $a < \{b, c, d\}$; $\{b < e\}$; $c < f$; $\{d, e, f\} < g$.

Find out the following time parameters for each job:
ES, LS, EF, LF, ST & MT for the project. Draw the Activity Network Diagram.

(P.T.O)

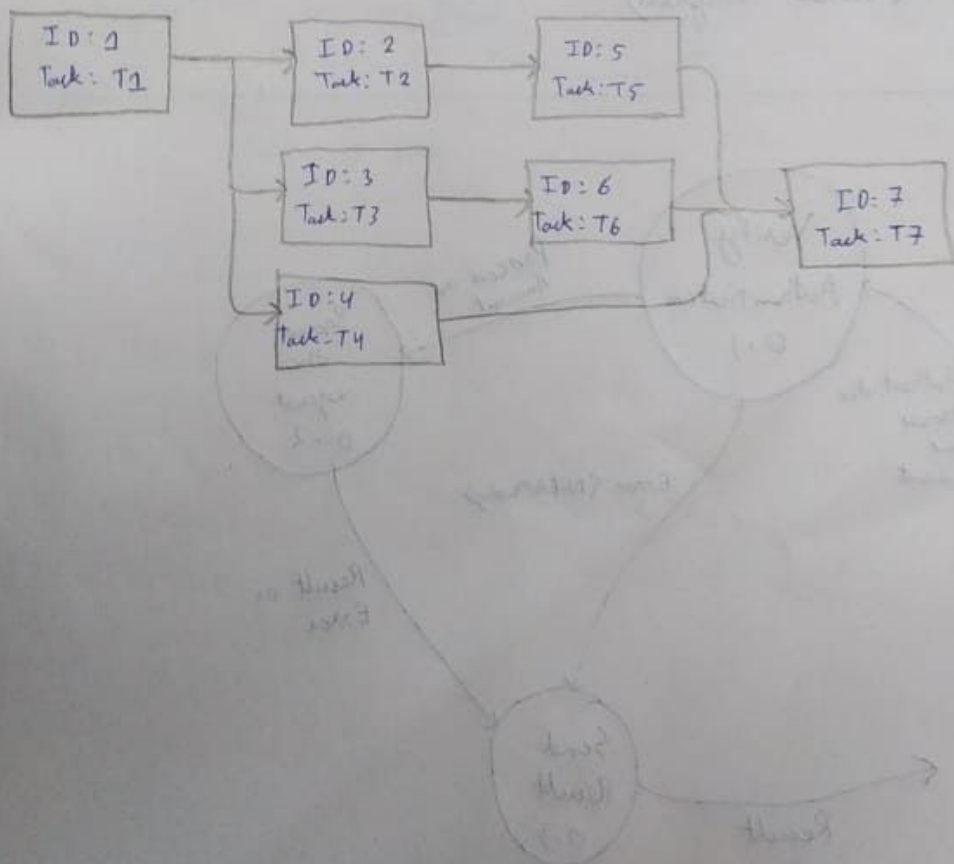
> Entry Table:-

ID	Task Name	Duration	Start	Finish	Predecessors	Early start	Early Finish	Late start	Late Finish	Slack
1	T2	10 days	03-03-21	16-03-21		03-03-21	16-03-21	03-03-21	16-03-21	0 days
2	T2	10 days	17-03-21	30-03-21	1	17-03-21	30-03-21	17-03-21	30-03-21	0 days
3	T3	20 days	17-03-21	13-04-21	1	17-03-21	13-04-21	31-03-21	22-04-21	10 days
4	T4	50 days	17-03-21	25-05-21	1	17-03-21	25-05-21	14-04-21	22-06-21	20 days
5	T5	60 days	31-03-21	22-06-21	2	31-03-21	22-06-21	31-03-21	22-06-21	0 days
6	T6	40 days	14-04-21	08-06-21	3	14-04-21	08-06-21	27-04-21	22-06-21	10 days
7	T7	45 days	23-06-21	24-08-21	4, 5, 6	23-06-21	24-08-21	27-06-21	24-08-21	0 days

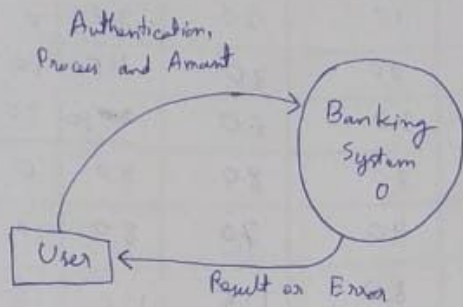
ES, LS, EF, LF, ST & MT:-

Task	Duration	MT (days)	ES (days)	LS (days)	EF (days)	LF (days)	ST (days)
T1	10 days	125	0	0	10	10	0
T2	10 days		10	10	20	20	0
T3	20 days		10	20	30	40	10
T4	50 days		10	30	60	80	20
T5	60 days		20	20	80	80	0
T6	40 days		30	40	70	80	10
T7	45 days		80	80	125	125	0

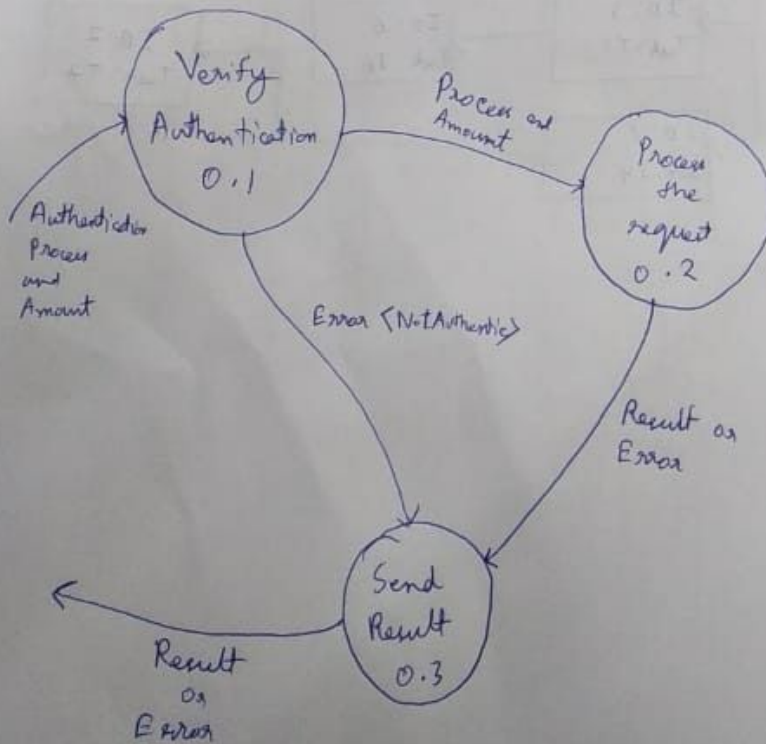
Network Diagram:-



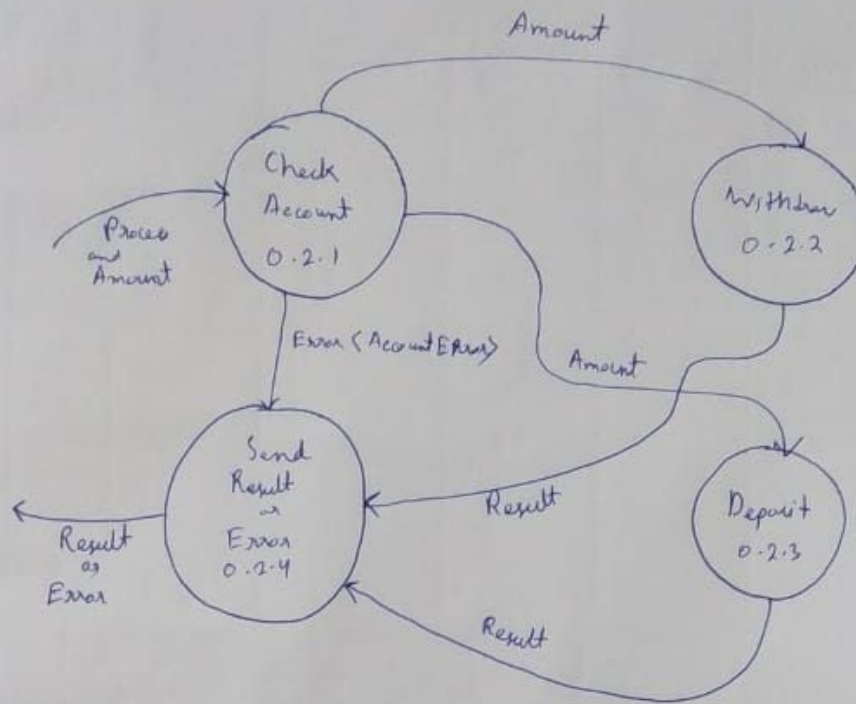
b) Draw a Data Flow Diagram (DFD) of a banking system.



Level 0 DFD
(Context Diagram)



Level 1 DFD



Level 2 DFD