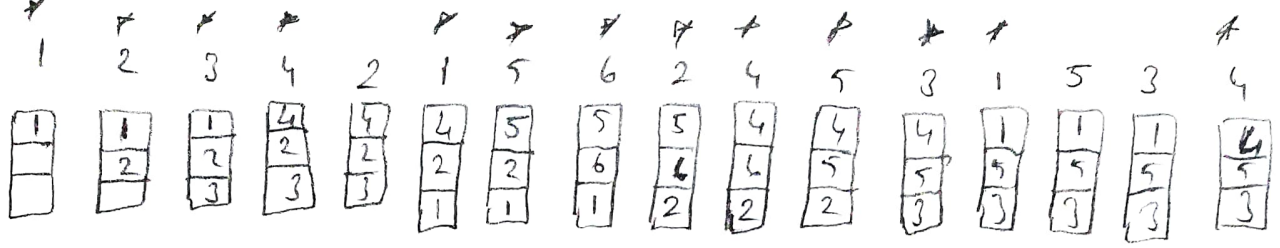
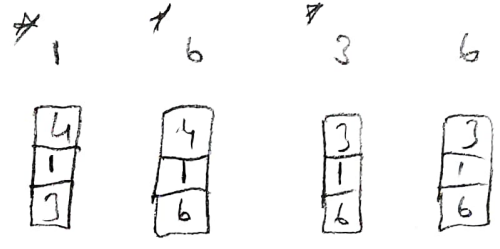


4-)

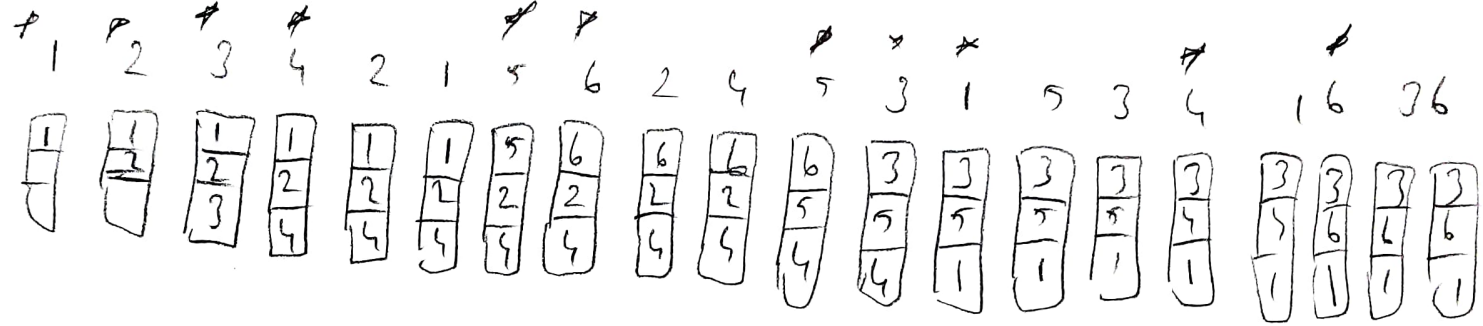


LRU

16 Page Fault!



5)



11 Page Fault!

5-)

a)

	Allocation	Max	Need	Available	
	A B C D	A B C D	A B C D	A B C D	Available
× P0	1 0 1 1	2 3 1 4	1 3 0 3	1 2 2 2	
P1	0 1 2 1	0 2 5 2	0 1 3 1	4 2 2 5	(P2)
× P2	3 0 0 3	4 1 0 5	1 1 0 2	5 4 2 5	(P3)
× P3	1 2 0 0	1 3 3 0	0 1 3 0	6 4 5 5	(P4)
× P4	1 0 3 0	3 0 3 3	2 0 0 3	7 4 6 6	(P0)
				7 5 8 7	(P1)
	+				
	6 3 6 5				

(1 sequence is enough)

b) <P2, P3, P4, P0, P1> is a sequence. So system is in the safe state.

c) System will remain in the safe state!

There can be sequence which shows us that system is in safe state

Q6)

sem_init(&S1, 0, 1);
 sem_init(&S2, 0, 1);
 ↪ initial value

```
wait(sem_t s){
  if(c > 0){
    sem_wait(&S1);
    c--;
  } sem_post(&S1);
  else sem_wait(&S)
}
```

```
signal(sem_t s){
```

```
  sem_wait(&S2);
  c++;
  sem_post(&S2);
```

```
}
```



s1 ar abasa
 block nahi