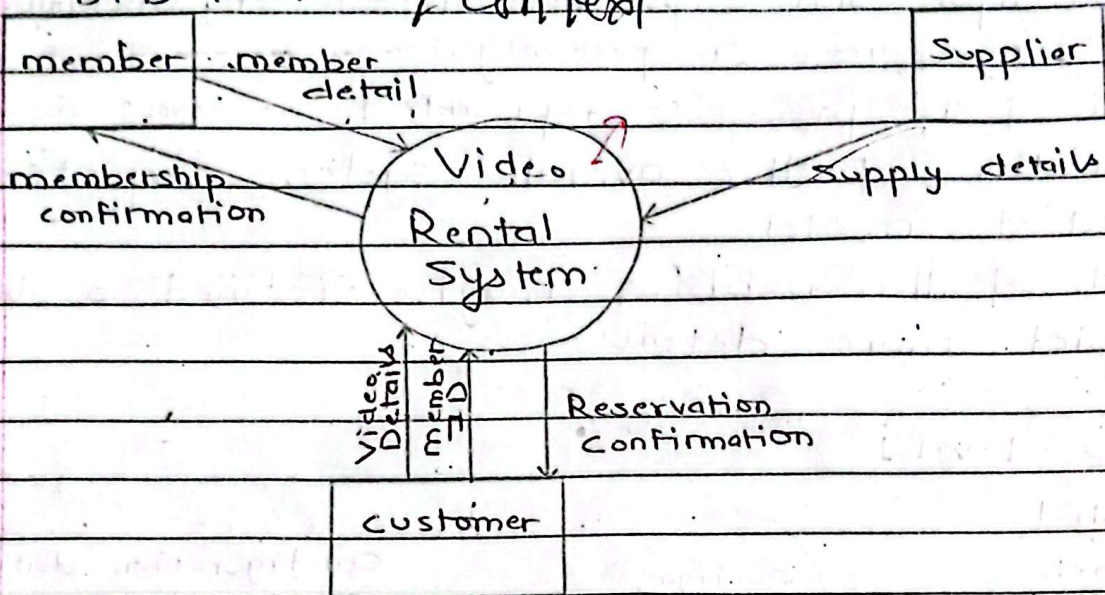
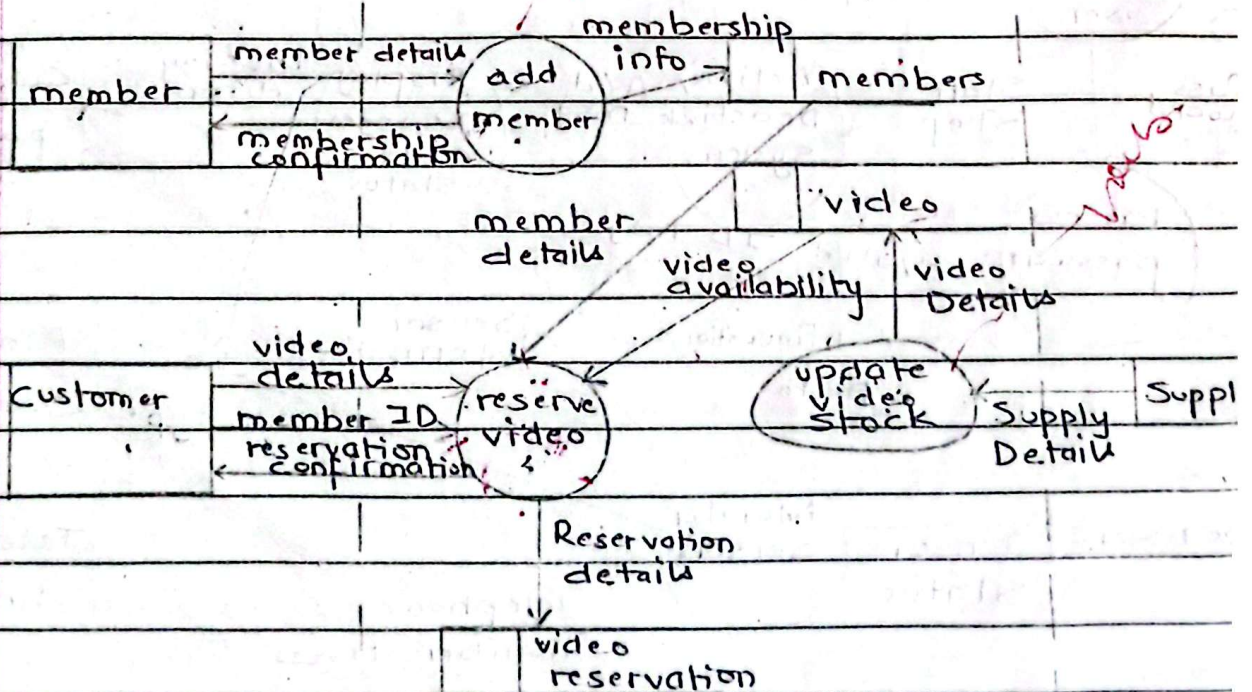


Video Rental System - Context Diagram

DFD level - 0 / Context



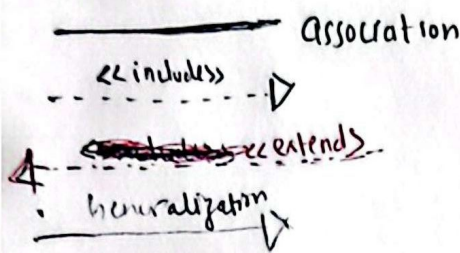
DFD level 1



Use Case Diagram

Symbols

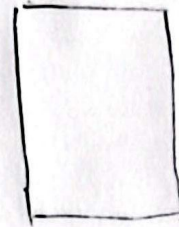
Relationships



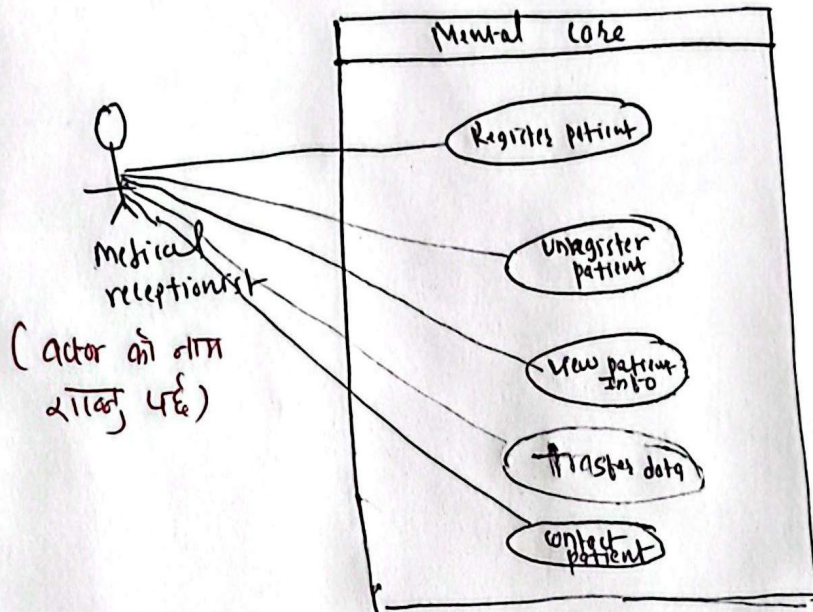
1) actor

2) Use case

3)



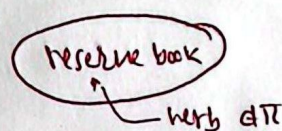
System boundary



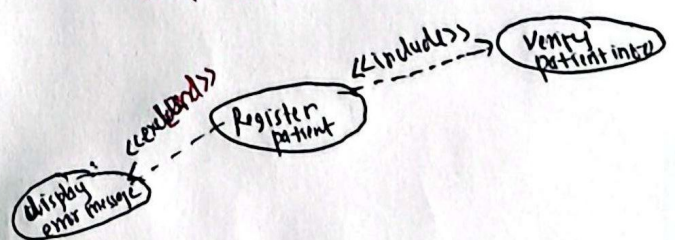
Note:

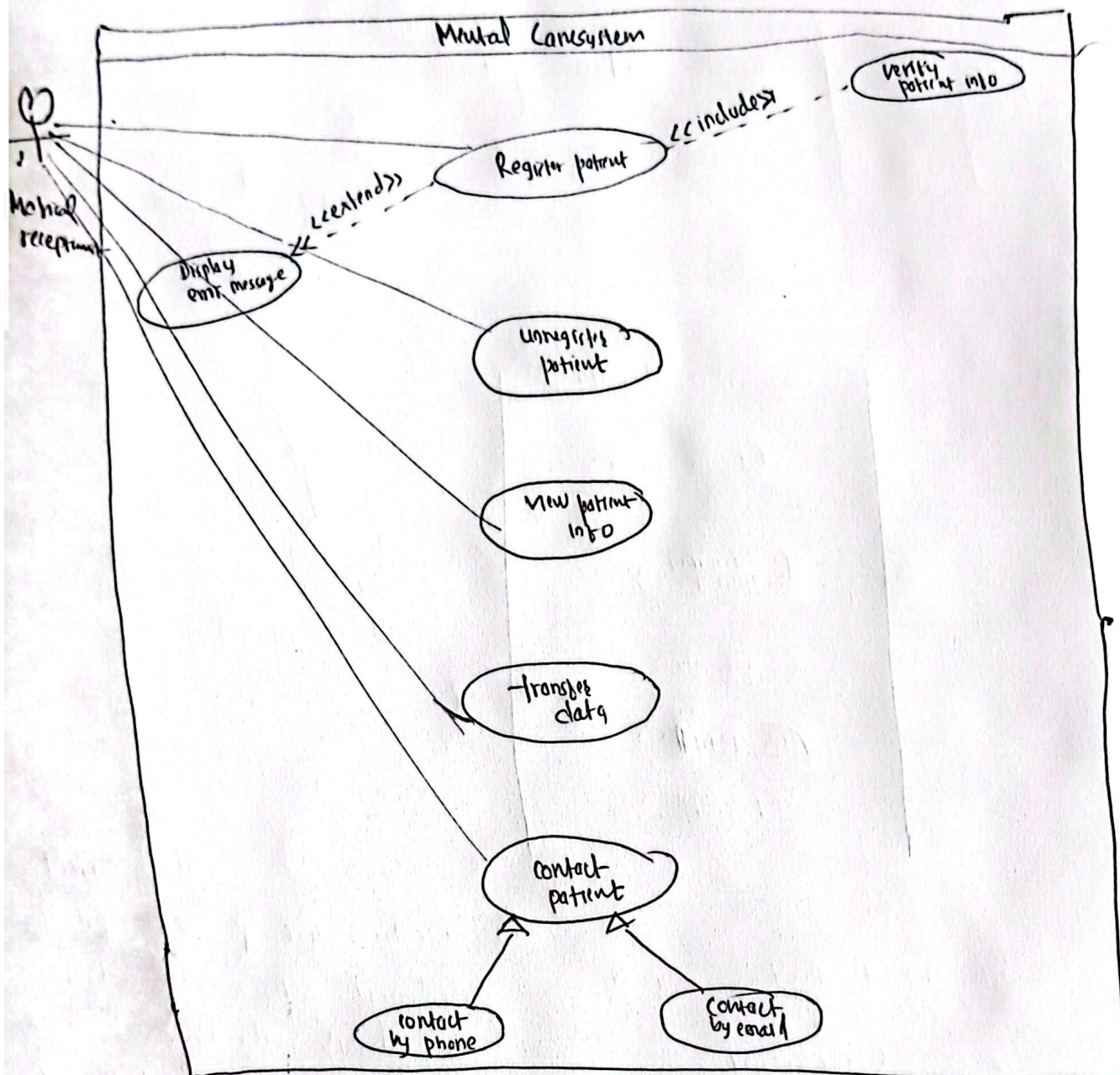
- 1) Actor लाई stick represent करें
- 2) Actor लाई system boundary भेदा बाहर रहते।
- 3) Actor को नाम राखें
- 4) Primary actor - जहाँ system initials रहे उसलाई left side में रहते
- 5) Secondary actor लाई - system को response देने और right side में रहते
- 6) Oval में Use case को राखें verb वाक्य में पढ़ें

e.g Book reserve की लागि



जहाँ use case simple type की गो 1 अल उसलाई relation ship राखें सकिन्छ।

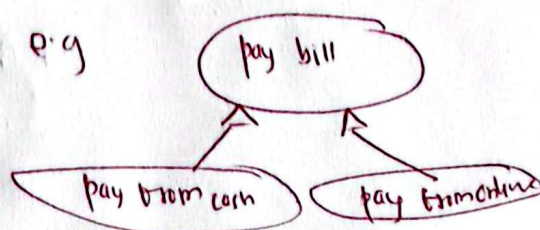




Note:- 1) जो use case execute हुं अर्को (new) use case mandatory हो गने include गरेर राखने।

2) Use case execute हुं अर्को (new) use case कहिले कोरे execute हुं गने extend मा राखने

3) Different alternative or child classes हो गने generalization



Sequence Diagram

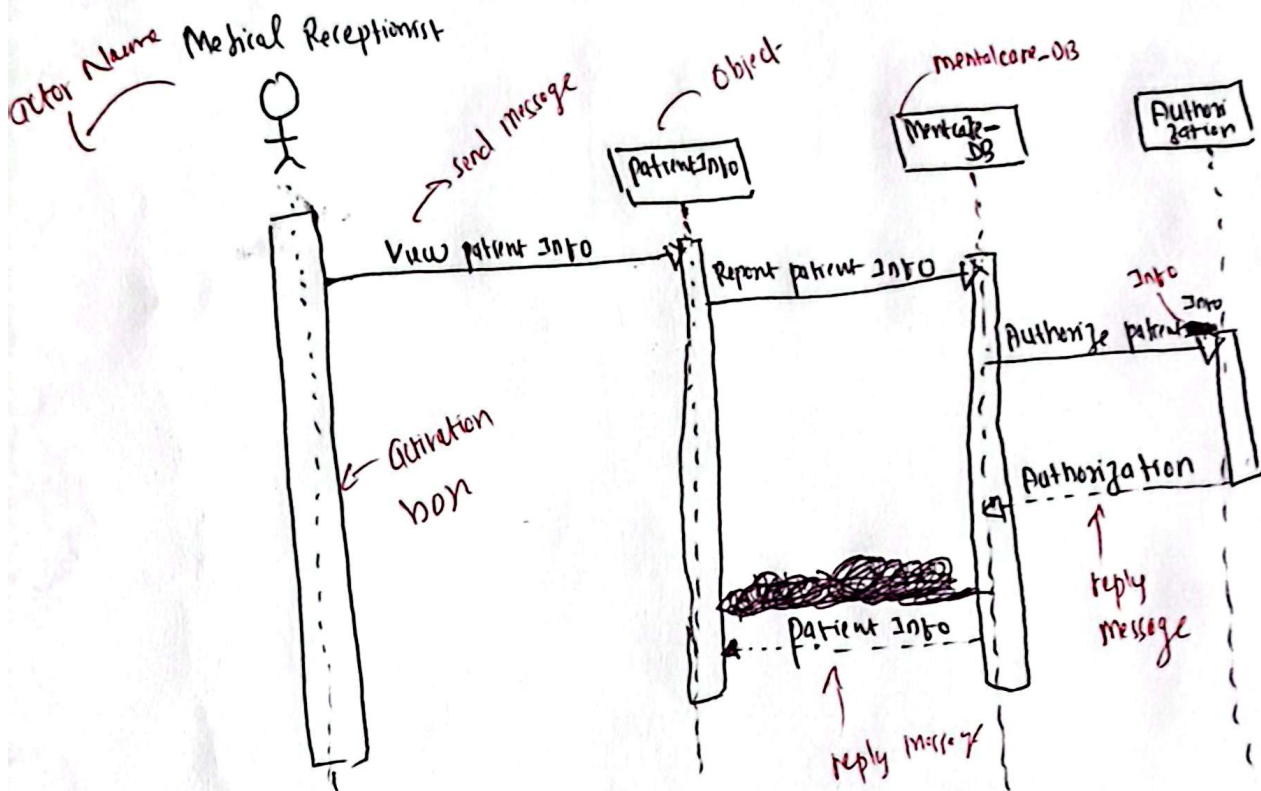
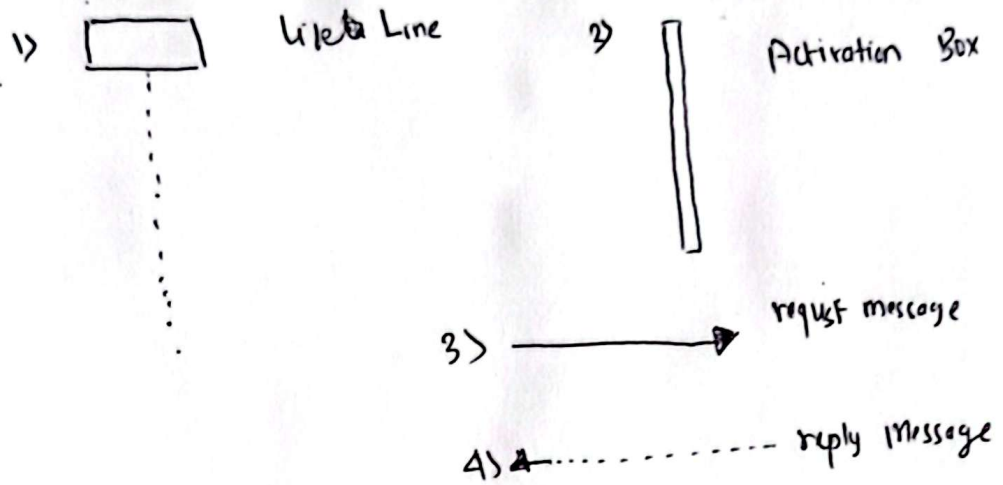


Fig:- Sequence diagram for view patient info

- Sequence diagrams in the UML are primarily used to model the interactions between actors and the objects in a system and the interactions between the objects themselves.
- Shows the dynamic behaviour of a system.

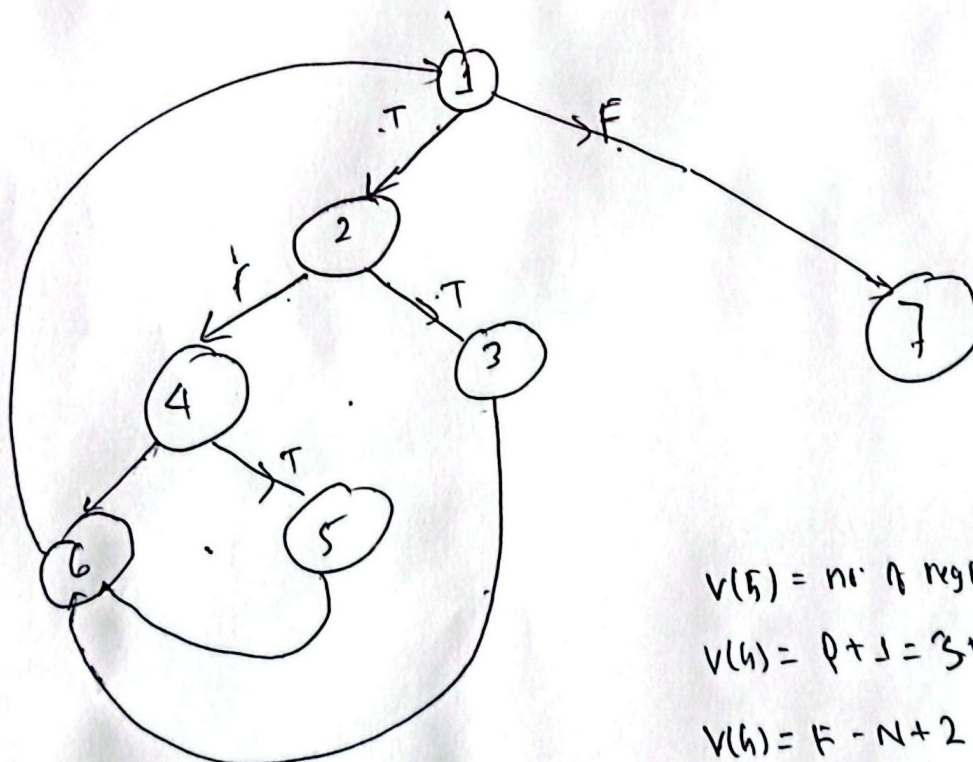
Assessment

```

while (condition) (1)
{
    if (condition) (2)
    {
        if body (3)
    }
    else if (condition) (4)
    {
        (5)
    }
    value update (6)
}
(7)

```

Note:-
True false is start



$$\therefore V(h) = 4$$

$$V(h) = nr \text{ of regions} = 4$$

$$V(h) = P + 1 = 3 + 1 = 4$$

$$V(h) = E - N + 2$$

$$= 9 - 7 + 2$$

$$= 4$$

Tutorial Solution

```
int main()
```

```
{  
  int a, b = 2;
```

```
  printf("Enter the value of a");
```

```
  scanf("%d", &a);
```

```
  while(a < b)
```

```
  {
```

```
    printf("a is smallest");
```

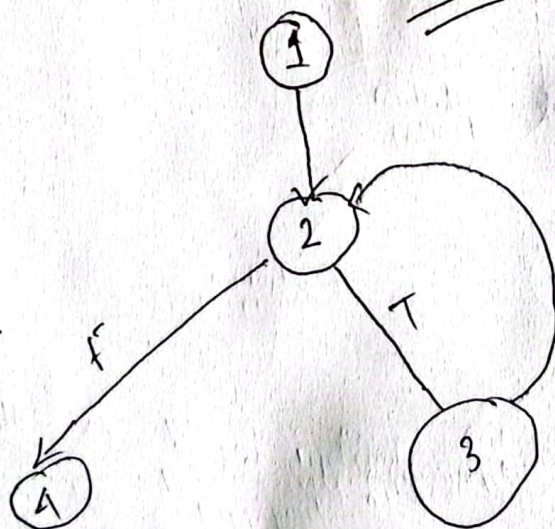
```
  }
```

```
  return 0;
```

value of a & question no

3

Step 1 Draw flow graph



Step 2 Determine $V(G)$

$$V(G) = \text{no. of regions} = 2$$

$$V(G) = p + 1 = 2$$

$$V(G) = E - N + 2 \\ = 4 - 4 + 2 = 2$$

\therefore Cyclomatic complexity of given graph is 2//.

Step 3 Determine independent path

Path 1 :- 1-2-3-2

Path 2 :- 1-2-4

Step 4

Determine test case

Assume $a = 5$ and given $b = 2$;

path 1: 1-2-4

Assume $a = 1$ and $b = 2$

path 1: \rightarrow 1-2-3-4