STATE MACHINE

State machine diagram

SM1

Input signal from cmd line (kill USR1 <pid>)

```
                    Down State

        Exiting State           Starting State

                    Running State
```

State machine

If signal from SM2

```
                                State Machine 2
```

Search for state machine 1
Search for state machine 3
 Send a signal to both the state machines

If Input signal given to Sm1

```
            State Machine 1
```

Search for state machine 2
Search for state machine 3
Send a signal to both the state machines

If signal given to SM3

```
                    State Machine 3
```
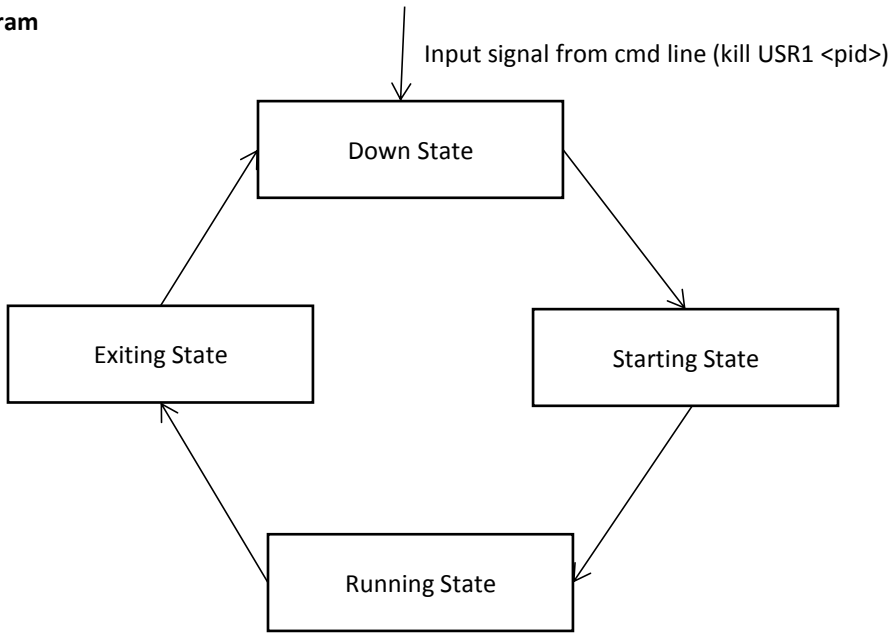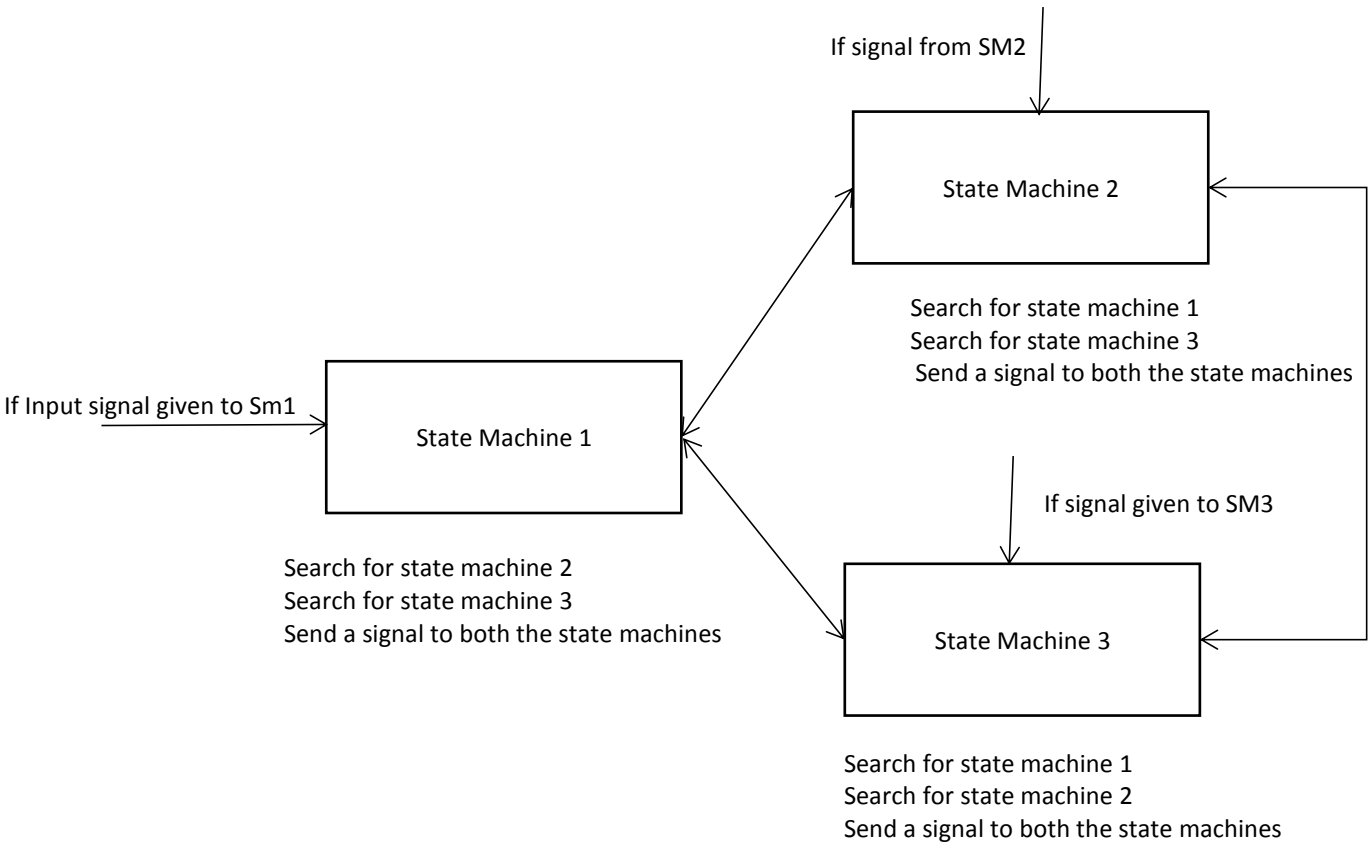
Search for state machine 1
Search for state machine 2
Send a signal to both the state machines

State machine :

A state machine is any device storing the status of something at a give time.The status changes based on input ,providing the result in output for the implemented changes

There are used in modeling of application behaviour software engineering ,network protocols compiler.

Inputs are like signals given to the system

Signal :

A signal is a software generated interrupt that is sent to a process.

A signal is sent to a process or command in order to notify an event that occurred

You can send various signals to command and process .for eg to terminate a foreground process hit ctrl+c .

Eg: SIGUSR1,SIGUSR2: user define signals
     SIGINT: Interrupt from keyboard.
     SIGHUP:Hang up detected on controlling terminal or desktop controlling process.

Kill() :

Send Signals to a process

Description :

The kill() system call can be used to send any signal to any process group or process.

If pid is positive ,then signal sig is sent to the process with ID specified by pid

If pid is equal to 0 ,then signal sig is sent to every process in the process