Time-to-Failure algorithm

Variables: clock, state={0,1,2}

```
Main(){
    Call Initialize()
    Do Until state=0
        Call Timer()
        Call next event on the list (Failure() or RepairCompletion())
    Loop
}

Initialize(){
        //Initialize variables
        clock=0
        state=2
        //Schedule the initial event
        Schedule next failure
}

Failure(){
    state = state -1
    If state>=1 then
        Schedule next failure
    ENDIF
    Schedule next repair completion

}

RepairCompletion(){
    state =state+1
}
```

One-server queue algorithm

Variables: clock, state={BUSY,IDLE}, queue

```
Main(){
    Call Initialize()
    Do Until the simulation run length is reached
        Call Timer()
        Call next event on the list (Arrival() or Departure())
    Loop
}

Initialize(){
        //Initialize variables
        clock=0
        state=IDLE
        queue=0
        //Schedule the initial event
        Schedule next arrival
}

Arrival(){
    Schedule next arrival
    If state=BUSY then
        queue= queue +1
    ELSEIF state=IDLE
        state=BUSY
        Schedule next departure
    ENDIF
}

Departure(){
    If queue=0 THEN
        state=IDLE
    ELSE
        queue=queue-1
        Schedule next departure
    ENDIF
}
```