**PSEUDO Code**

**State are UNKNOWN, IDLE, HEATING**

1. **Declare prevState, interval, temp = 0, desTemp = 25, timer**
2. **prevState = UNKNOWN , Get temperature and assign to “temp”**
3. **If prevState == UNKNOWN OR (prevState == HEATING AND temp >= desTemp ) OR**

**(prevState == IDLE AND temp>=desTemp) ?**

* 1. **if prevState == HEATING?**

**Turn off heater**

* 1. **prevState = IDLE**
  2. **Interval = 5**
  3. **timer = 0**
  4. **If timer < interval ?**

**Wait for 1 sec**

**timer = timer + 1**

**Go to # 3.5**

* 1. **Get temperature and assign to “temp”**

**3.7 Go to #3**

1. **If (prevState == IDLE AND temp<desTemp) OR (prevState == HEATING AND temp < desTemp )?**

**5.1. if prevState == IDLE ?**

**Turn on heater**

* 1. **prevState = HEATING**
  2. **Interval = 10**
  3. **timer = 0**
  4. **If timer < interval ?**

**Wait for 1 sec**

**timer = timer + 1**

**Go to # 5.5**

* 1. **Get temperature and assign to “temp”**
  2. **Go to #3**