Statechart and Activity Modeling

Draw a statechart diagram to graphically represent the following system

Consider a bulb with a push down switch. The bulb initially remains off. When the switch is pushed down, the bulb is on. Again when the switch is pushed up, the bulb turns off. The lifecycle of the bulb continues in this way until it gets damaged.

Think about these points:

- What are the different states of the bulb?
- What activities are performed in each state?
- What action does make the bulb move from one state to another?

Learning Objectives:

1. Identifying different states of a system
2. Identifying activities performed in each state

Limitations: A complex system often has sub-states, which is not covered as a part of this lab. The following interface only let you represent simple states. Please check out the references section to know more about them.

Submit

Statechart Diagram **Activity Diagram**

Table #1: Add states of the system

State Name	Add
	Add

Table #2: Internal activities of a state

State Name	Action Label	Action Expression	Add
Damaged	Entry		Add

Table #3: Add a note [optional]

State Name	Note	Position	Add
Off		Bottom	Add

Table #4: List of system states

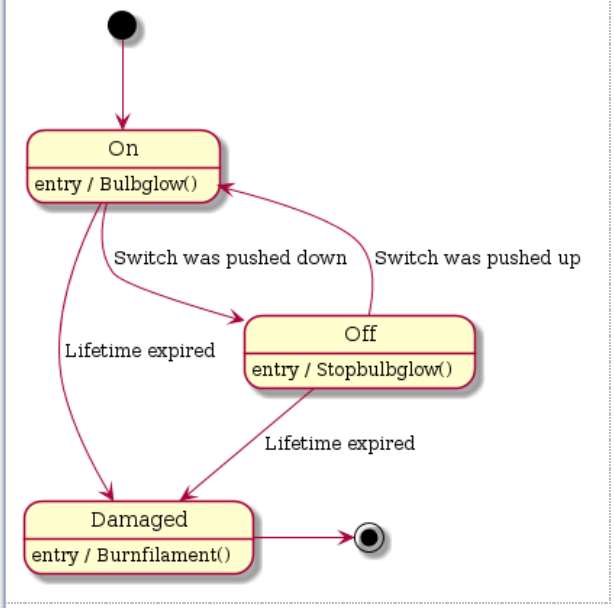
State	Activities	Note	Position	Remove
On	entry / Bulbglow()			
Off	entry / Stopbulbglow()			
Damaged	entry / Burnfilament()			

Table #5: Define state transitions

Current State	Next State	Event	Guard Condition	Action	Add
Damaged	Final				Add

Current State	Event	Guard Condition	Action	Next State	Remove
Initial				On	
Off	Switch was pushed up			On	
On	Switch was pushed down			Off	
On	Lifetime expired			Damaged	
Off	Lifetime expired			Damaged	
Damaged				Final	

Draw



Result

View Solution