Discussion II - State Machines

Version 2.0

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1 ORGANIZING THE STATE MACHINE

Possible Organization of **FSM** Code

[Part 1] Capture input and/or wait for trigger (such as user input or time elapsed)
[Part 2] Preprocess, update common or extended state variables
[Part 3] **Switch (state)**
case S0: decode actions
decide state & extended state variables update
case S1: ···
[Part 4] performs actions (such as output) . . . **Go to** [Part 1]

Concepts:
extended state variables
substates
Triggers (when to perform FSM iterations)

2 CONTROLLER

Write an **Assembly** code of state machine that controls Led and Buzzer on Avr Microcontroller with a Button.

State Machine Structure:

State 1 : Rest State
State 2 : Led On
State 3 : Led On and Buzzer Beeps
Transition between States is controller by a button

You will be given partial code which includes functions that are necessary to perform actions. Write the State Machine Code appropriately for System to function

Suggestions for writing Code:

1. Go through given code Once
2. Handle Transition Properly Before Jumping to next state