

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 Micro-controller 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