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 TEXT WARS

Write a program that can identify key words in an input string. The program will be reading in individual characters and is not allowed to store any previous character. When two **UNIQUE** key words are found, print a success message and end the program. If two unique key words are not found in 15 seconds, print a time out message and end the program.

Key words:

star
sith
darth
tarkin

Notes on printing the output:

1. Display time remaining at every second
2. Display key word upon detection
3. Display success message when second key word is detected
4. Display time out message after 15 seconds have passed

May the force be with you