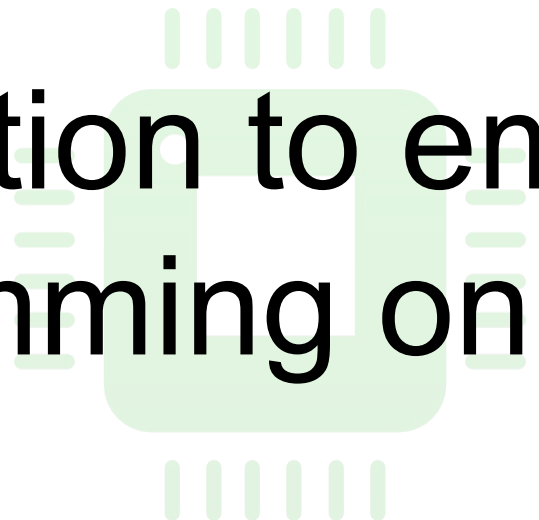


Introduction to embedded programming on STM32



More abstractions

Spaghetti code. Example

Unstructured and difficult-to-maintain source code

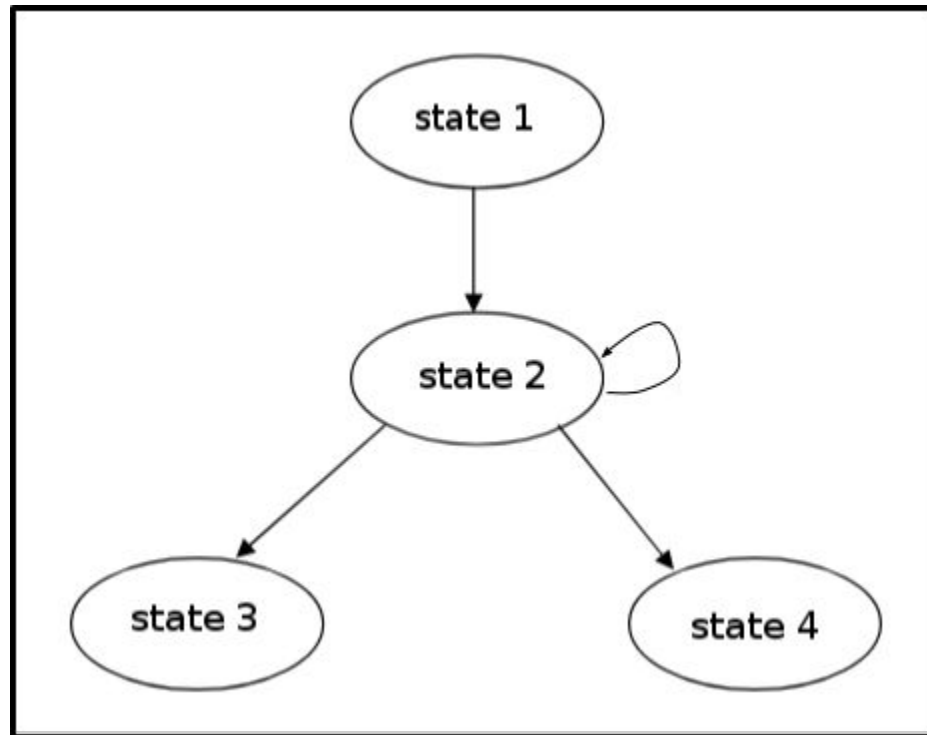
Possible solutions

Higher level of abstractions

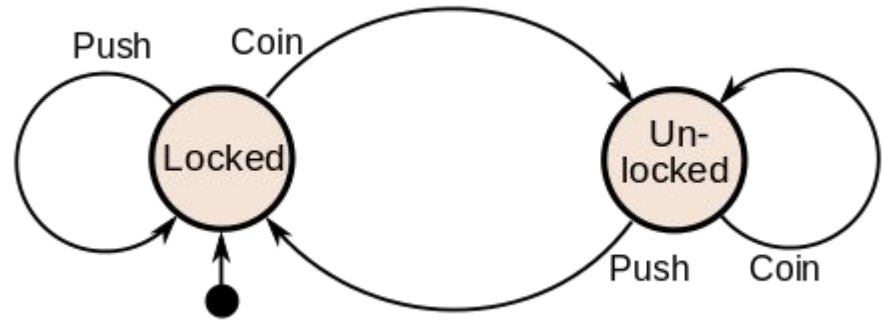
Finite state machine. Definition

It is an abstract machine that can be in exactly one of a finite number of states at any given time

FSM



FSM. Example. A turnstile



Finite state machine. A transition table

Current State	Input	Next State	Output
Locked	coin	Unlocked	Unlocks the turnstile so that the customer can push through.
	push	Locked	None
Unlocked	coin	Unlocked	None
	push	Locked	When the customer has pushed through, locks the turnstile.

FSM. A transition table. General case

Input \ Current state	State A	State B	State C
	State A	State B	State C
Input X
Input Y	...	State C	...
Input Z

FSM. Terminal example

