

State machines

To have this assignment evaluated for the in-class exam, please upload on WeBeep a ZIP file including:

- the source code used to solve this assignment
- this file, with the table below properly filled

Name (Family + given)	Makovec Matteo
Student ID (codice persona)	10782774
QR-code ID (8 digits of the QR that was given you)	24499815
Sensing probability	0.528920
Using CPU probability	0.258046
Turning on the Heat pump	0.081598
Turning on the Air conditioning	0.146764
Sensing frequency	0.017300
State machine drawing:	
<pre>graph LR CPU[1: CPU] -- Erlang(0.1, 3) --> TS[2: Temperature Sensor] CPU -- Unif(10, 20) --> D{ } D -- p1 = 50% --> TS D -- p2 = 30% --> AC[3: Air Conditioning] D -- p3 = 20% --> HP[4: Heat Pump] AC -- Exp(0.03) --> TS HP -- Exp(0.05) --> TS</pre> <p>The diagram illustrates a state machine with four components: 1: CPU, 2: Temperature Sensor, 3: Air Conditioning, and 4: Heat Pump. Transitions are as follows: CPU to Temperature Sensor via Erlang(0.1, 3); CPU to a decision diamond via Unif(10, 20); the decision diamond to Temperature Sensor via p1 = 50%, to Air Conditioning via p2 = 30%, and to Heat Pump via p3 = 20%; Air Conditioning to Temperature Sensor via Exp(0.03); and Heat Pump to Temperature Sensor via Exp(0.05).</p>	