TASK 02

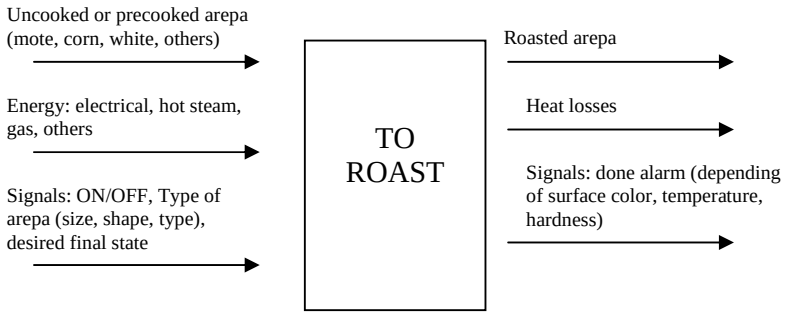
1. Describe the properties of all the operands in the initial and final state:

Operand		
Type	State	
	In-1	Out-2
Material	• Type of arepa (mote, corn, white, others) • Initial state: uncooked, precooked	• Cooked Arepa • Final state: tosted, medium, soft
Energy	• resistances • forced air • contact • infrareds to gas	Heat
Information	• Temperature In (frozen or environment temperature) • Units In • Energy consumption in/unit • Weight in/unit	• Temperature Out • Units out • Energy consumption out/unit • Weight out/unit

2. Create the structural function:

- Find the general function of the "Arepa toaster"
- Find partial functions on which the general function can be divided.

Black Box:



Partial functions

- I'm going to roast an arepa
- Select number of units
- Turn On the arepa toaster
- Select type of arepa (mote, yellow, white, others)
- Select final state of the arepa
- Eject arepa holder
- Put arepa on holder
- Insert arepa and holder inside oven
- Scan the temperature of the surface

- Heat source turns On depending of temperature of the surface
- The roaster must calculate the time depending of input information
- If the information captured by the sensors is equal to the set point, the heater source turns Off
- Activate done alarm
- Holder is ejected
- Remove arepa from holder
- Clean the holder
- Insert holder back
- Turn Off the system