



**Quiz # 5 - Section XBG – Team # 7 - Grade = 2.4**

M	ID #	Name
1		
2		
3		
4		
5		
6		

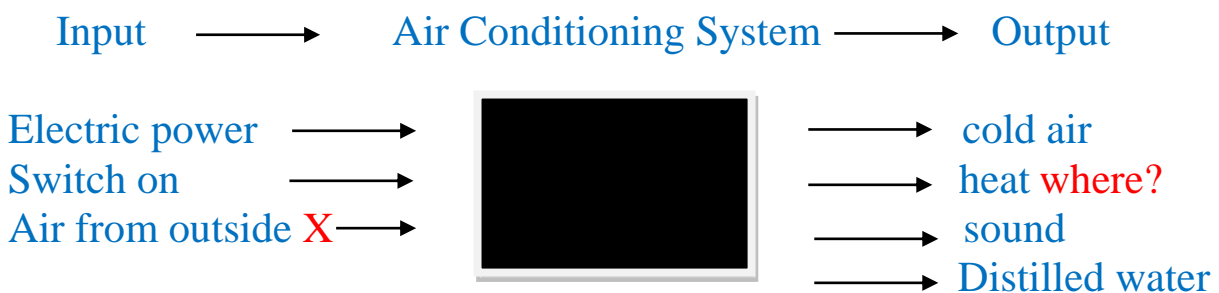
**Design a Split Air-Conditioning System.**

Understanding the design process starts by defining the functions. Among the tools used to define the input and output functions is the black box approach. On the other hand, the transparent box is used to define the functions that take place within the process such that the desired outcome functions are achieved.

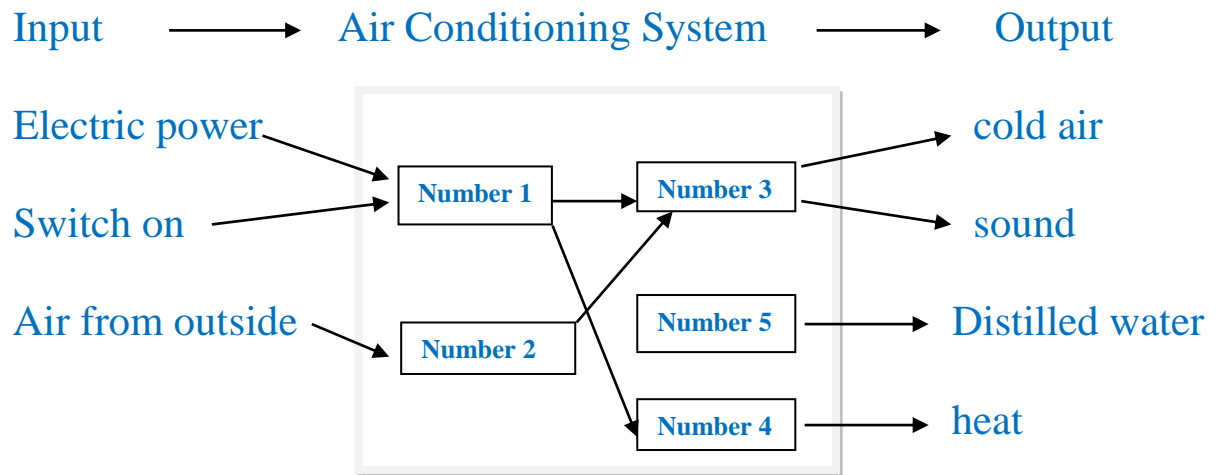
For the design project stated above draw:

- 1. The Black Box. 0.8**
- 2. The Transparent Box. 0.6**
- 3. The Functions-Means Tree. 1**

**1- Black Box**



## 2- Transparent Box



- 1- switching on the button connects the circuit to provide electricity
- 2- Electricity allows the collection of warm air which passes through a chamber containing cooled water storages. A fan inside serves to blow the cold air out
- 3- sound is caused due to the inside fan and motor
- 4- some electric and mechanical energy is lost in the form of heat, in addition to the heat release from the outside unit
- 5- distilled water is caused due to the condensation humid hot air collecting around the cold storage

How about the refrigeration cycle? Compression & evaporation?



### 3- Functions-Means Tree

