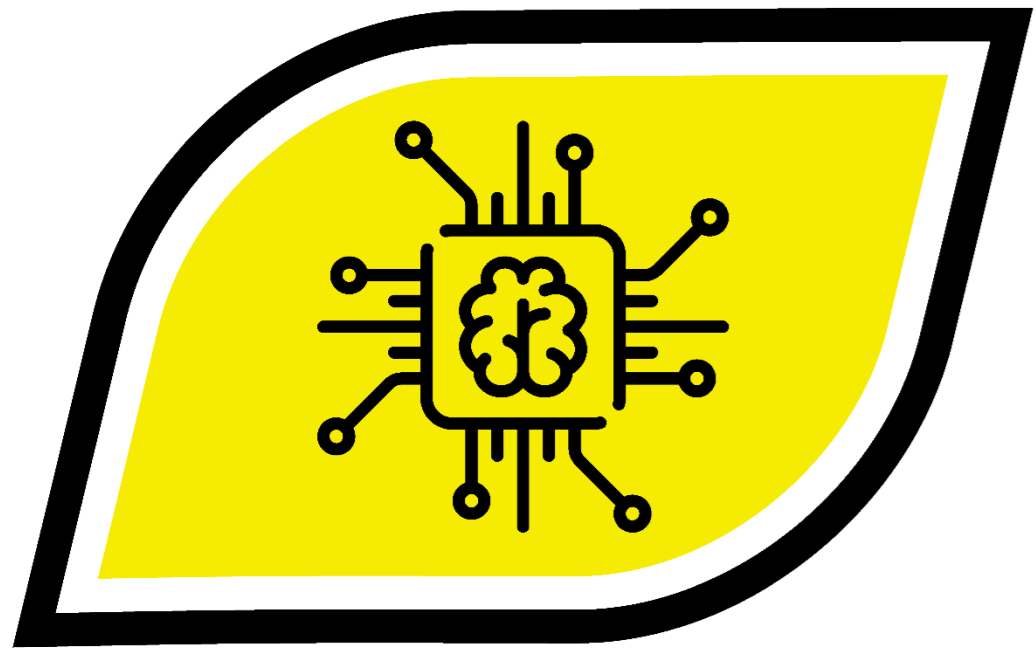


A Simple Refrigerator to Sustain the Life of Poor People



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Introduction

Refrigerator is a machine or system whose function is lowering and maintaining the temperature of materials in order to keep them safe and fresh for long period of time. Refrigerator are of many types which are categorized according to the two factors which temperature controlling and structure.

There are three types of refrigerator according to the temperature controlling which are normal refrigerator used for cooling and storing material, freezer used for freezing and ultralow refrigerator used as preservative of media in microbiology laboratory.

According to the structure there may be chest up refrigerator or deep freezer (refrigerator).

Refrigerator has a lot of benefit to its users. The importance of refrigerator

- They are used for keeping materials fresh for long period of time.
- They are used for making materials safe for a long period of time by preventing entrance and growing of microorganisms which may cause decay and spoil.
- Refrigerator also help to keep materials free from dusts and contamination

Method

The simple refrigerator was made through the following procedures.

- A base plate was cut and bent into a cuboid shape.
- Rollers were fixed at the back of cuboid shaped structure made of base plate by using diverting pins.
- A bucket was prepared and fixed at one side of a cuboid plate.
- A compressor was fixed to the second side of a cuboid structure made from a flat plate.
- A condenser was fixed around the bucket (outside).
- Pipes were coiled inside a bucket to make evaporator part of a system.
- Pipes were joined from the evaporator to the compressor and from the compressor to the condenser.
- Also expansion valve and filter drier were fixed between evaporator and condenser by soft soldering.
- Refrigerant was filled in the compressor after filling of oil as lubricant during running.
- Electric system was joined to the system and the system was tested.

Results

The following things were discussed during the project

Why have we decided to make this refrigerator?

We have decided to make the refrigerator because it may become more efficient in use compared to modern refrigerator also it easily affordable to many people.

What are the importance of this refrigerator

- It is cheap, easily affordable.
- It is easy to make repair and services.
- It is portable.

How does the refrigerator works?

- The refrigerator works as follows

A compressor compress the refrigerant which is inside causing rise in temperature. The refrigerant changes into vapour refrigerant which is discharged through discharging valve to the condenser. In the condenser the refrigerant is cooled and converted to a liquid form and allowed to flow filter drier in which dusts and moisture is removed. Then the refrigerant is allowed to pass through the expansion valve to the evaporator. In evaporator the refrigerant (cold) absorb heat from the material inside the refrigerator. The heat converts it into vapour form then its allowed to flow to the compressor through suction line and suction valve. Then the system restarts.

Conclusion

From this project we can make our own simple refrigerator which can work more efficient than the modern refrigerator with less cost of purchase.

So, In order to minimize the cost of many electronic devices young scientists we are supposed to be creative.

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