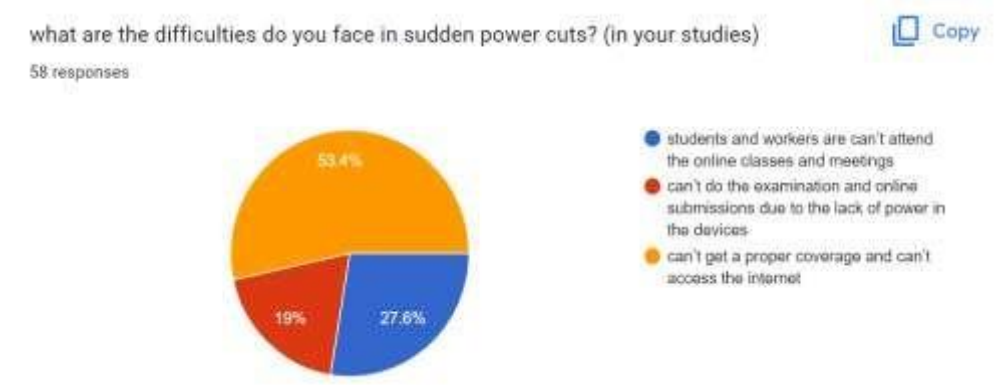
ANALYZE OF OUR DESIGN PROJECT STAGE-02

AUTOMATIC POWER DISTRIBUTION & SOLAR SYSTEM

Due to the economic crisis in our country, there are several problems facing by students & employees. Regard to this fuel crisis all schools and universities are closed, and the studies and works are going on online platform. And several hours of power cut in these days also. So, the students and workers can't attend the online classes, can't do their examination and online submissions due to the lack of power in their devices (laptops, phones, E-Tablets). And, during the power cut hours they can't get a proper coverage and can't access the internet. Because most of the students are using Wi-Fi routers for access the internet.

So, we planned to get a survey from the students and employees. We create a form and publish in the online platform. On this work we obtain so many problems other than mentioned above.



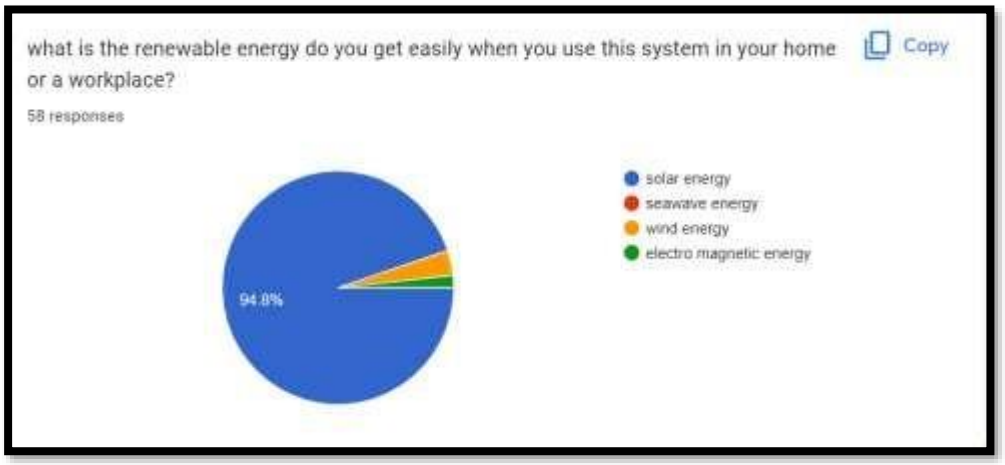
So, as electronic engineering students we have a responsibility to give a best solution for the students and internet-based employees. Because our country earned a lot of dollars from IT – related workers and we are rich in education professionals and our country is an empire in education sector in all over the world.

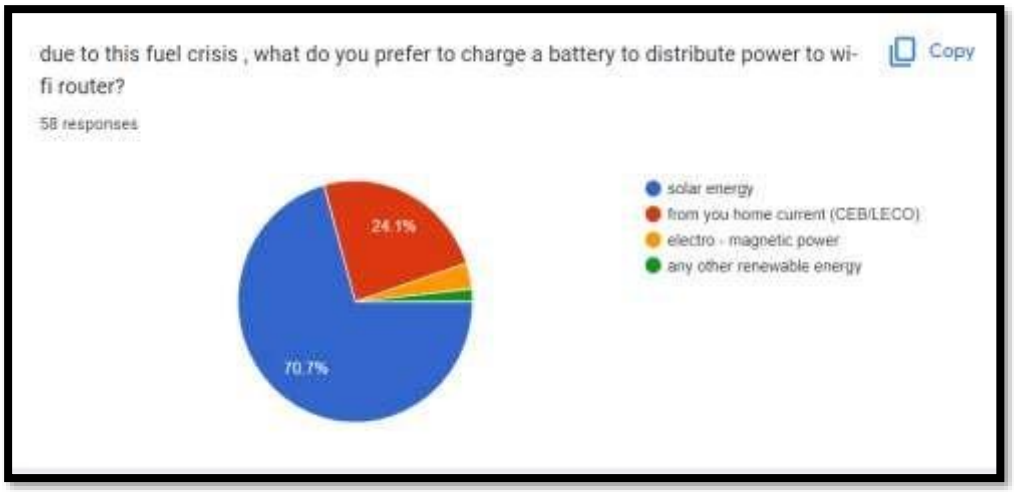
So, we gave a concern about that major issue in our country and came with a best and reasonable solution for that problem.

In our country we can produce the power not only with the fuel and coal but also there are many renewable energies to produce the power. So, we discussed this and came a final decision to use solar power to produce the electric power. Because it is the simple,

reasonable, anyone can use this in the home any part of our country and it took a small space to place this system.

In that manner we asked the users about the power source for this Wi-Fi system. How is it easy to operate in their workspace. They also prefer solar energy for this product.



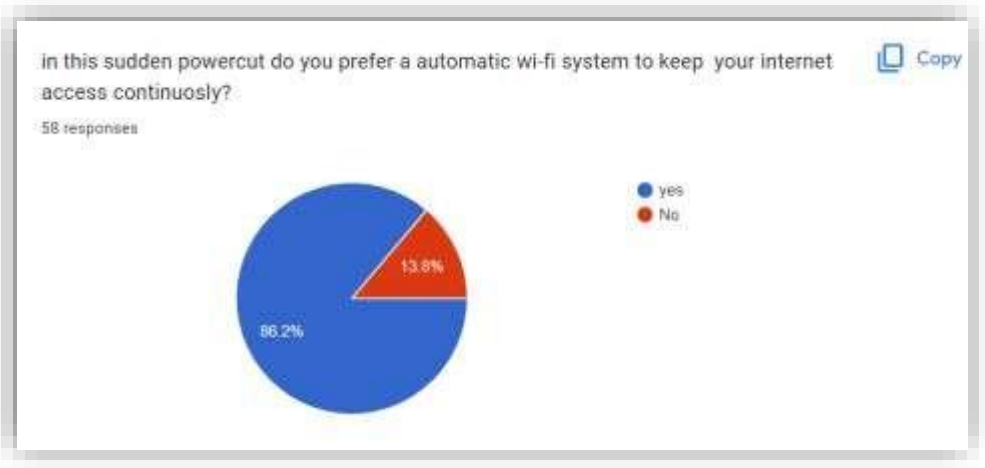


With this process we can use a simple electronic product to convert solar energy to electrical energy and charge a battery from this power. So, we can use this electric charge during the several hours of power cut to do our important IT-related works and online platform studying. so, we can overcome with this power issues.

And another problem is sudden internet network loss in the Wi-Fi at the power cut times. To overcome this issue, we discussed to product an automatic power distributor for Wi-Fi to keep the power distribution continuously. From this process we can eliminate the sudden internet loss from Wi-Fi, and we can continue our internet-based works with not issue.

So, we planned a product, and we asked the users that is the product is useful or not?

Their answer is impressed us and it motivates us to do our work continuously. About 86.2% of 58 people agreed with our product.



So we planned to make product afterward conducting survey what many of them suggest and also what are the alternate methods also they suggest we will discuss them in curiously to take in consideration. While conducting survey we got around 60+ surveys with-in a day. Many of them suggest they were facing internet facilities while doing online lectures. We take that into our curiosity consideration and also some of them suggest about lab, mobile charging when attending lectures, we need to have more power backup too, and others said about the light gone out, etc. But we make a curious consideration with our project team, and they suggest us to make another survey about Internet connection while online lectures and we found there are 3 possible ways we can solve these problems. By using power backup (Power bank), rechargeable Wi-Fi router and using renewable energy power source to power up Wi-Fi router, etc. We need to clarify which of the method they are suggesting among those 3 methods and also what are the drawbacks are available for that method. The summary of survey is given below.

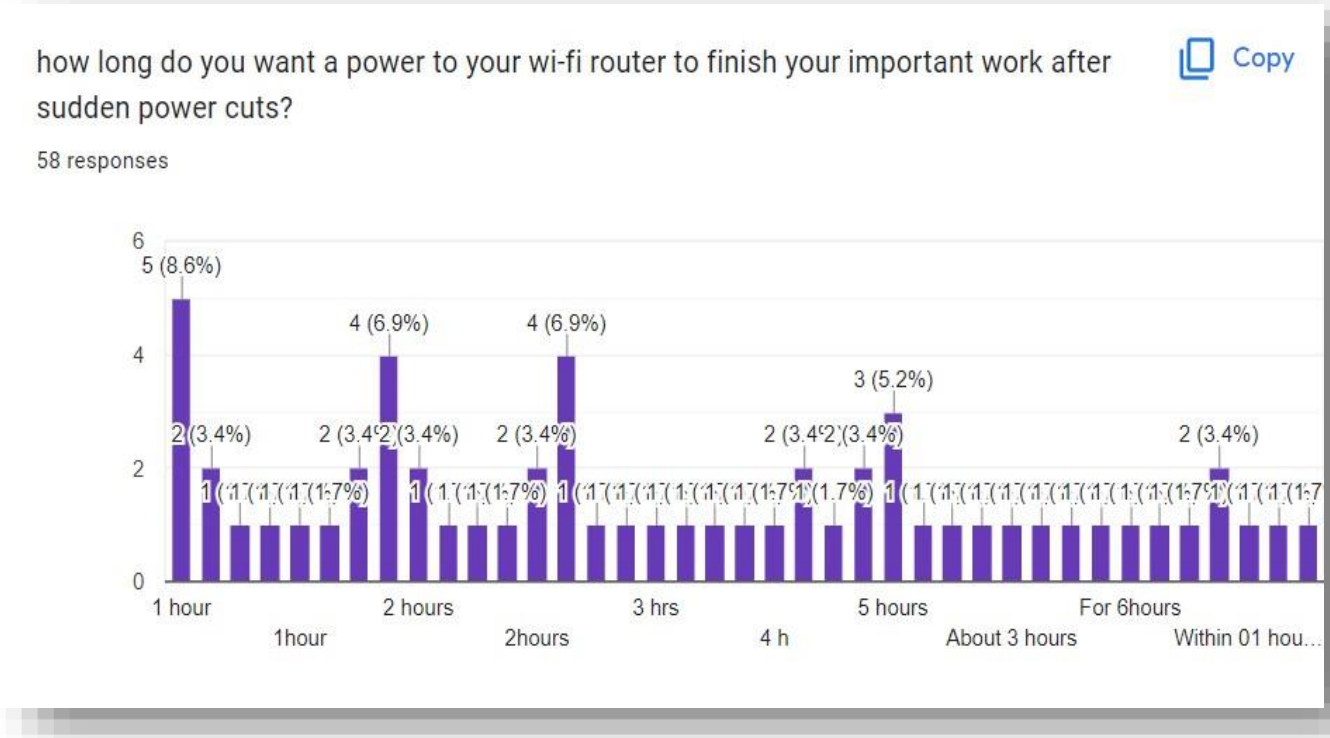
Wind	Cost
Wind or solar system	Availability of getting wind and sun rays
Connecting the router to powerbank	Charging time
DC current	Power cuts
Anything like a battery	I didn't try
Backup	Unefficient
Having a Powerbank	There is no proper system to power up the router using a powerbank
No idea	No idea
Wind power	Too expensive never bought it
Wind Energy	Less of wind
Ups	Expensive nowadays
Wind power	-
We can use inverter charger to powr up.but using wifi is not a solution..beyond that we need coverage	coverage issue...if i have power also i couldnt get good coverage
No idea	Expensive
Use a high capacity usp	The price is very high
Rechargeable wifi	Cost may hight to purchase
Ceb	Initial cost is really high
UPS	Less time
Ups	Cost

Use chargeable routers	Have to charge
A backup battery	low capacity
With the help of Auto batteries	Charging issuses
We can use rechargable router	Expensive
Power bank	Battery run out
Power bank	Breaks down quickly. Money is needed more
Rotating a motor by hand and quickly store much energy	Will get Tired
Vehicle battery	Not having necessary instruments
Power bank	Can use only limited time

Hydro power	Nothing to be mentioned
Hydro power	It is very difficult and expensive to implement
Electricity from wond power	High cost, we wouldn't get the same power every time
An inverter and a battery	Not enough to power the whole house for long times
power banks	cannot use long time

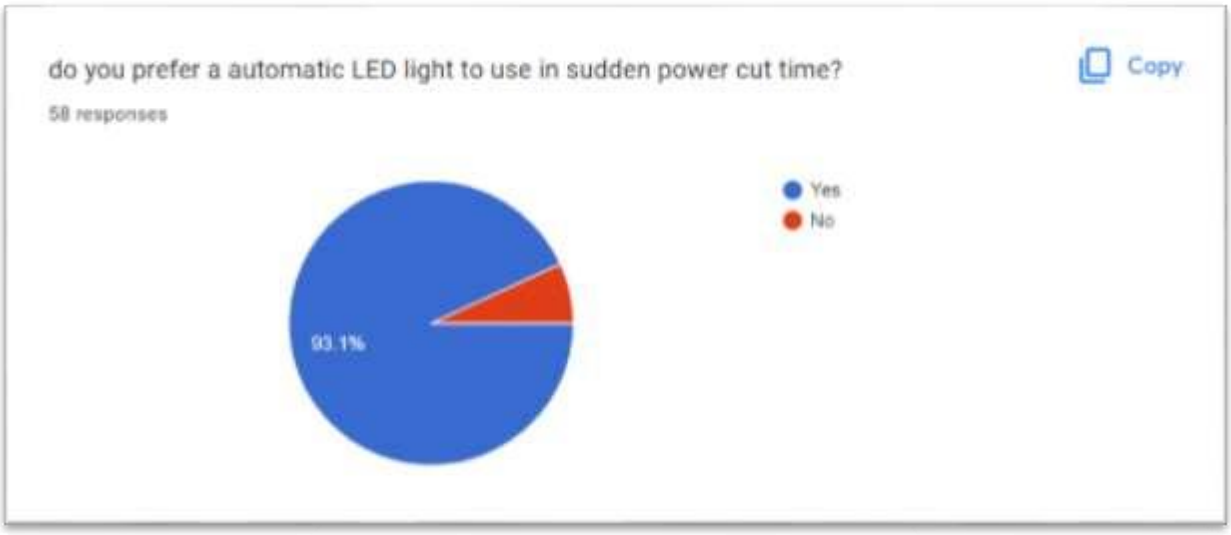
There are so many alternative methods to do. But there are many issues with those facts.so, we planned that solar energy system is the proper one to do this product.

With these issues we assumed a product that give a power to Wi-Fi router for several hours whether the power cut is too long. So, we asked the users that how long they want a proper internet access during the power cut. They reply vary in below manner.



In power cut times users want a small LED light system also in their desk. Because we can't manage our works in the dark. So, we planned a system that automatically power on a light in power cut times. With this idea we can attach that system also in our product that automatically power on the light and make easy their works.

So, we asked that beneficial product also to include in our product.



Answer is much appreciating us and we include that system also.

From this we can use this product to work with another important device also. With the users' request.

Fan,light,bathroom light	Charger for lap
Laptops	Fans, chargers
Light,	Powertank
Fan, Light	Phones,Laptop
Bulbs	Fan light WiFi
Mobile phones, lap	Air conditioner
PC	At this time, No
Wifi router	Old Car battery to supply current
	Light

After that we decided to make our product with the reasonable and simple way. So, we make a circuit design and approximate the cost also. So, we asked the users and they request us to do with approximately 6000-8000 rupees.

If you are willing to buy this product,what is the maximum amount would expect to spend to purchase?

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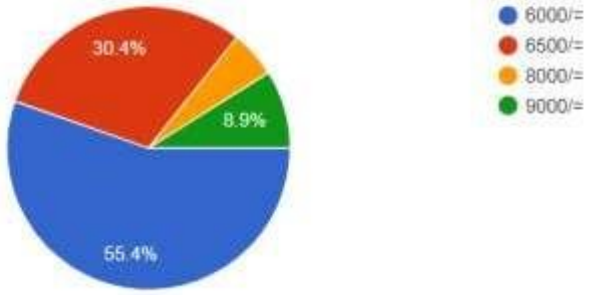
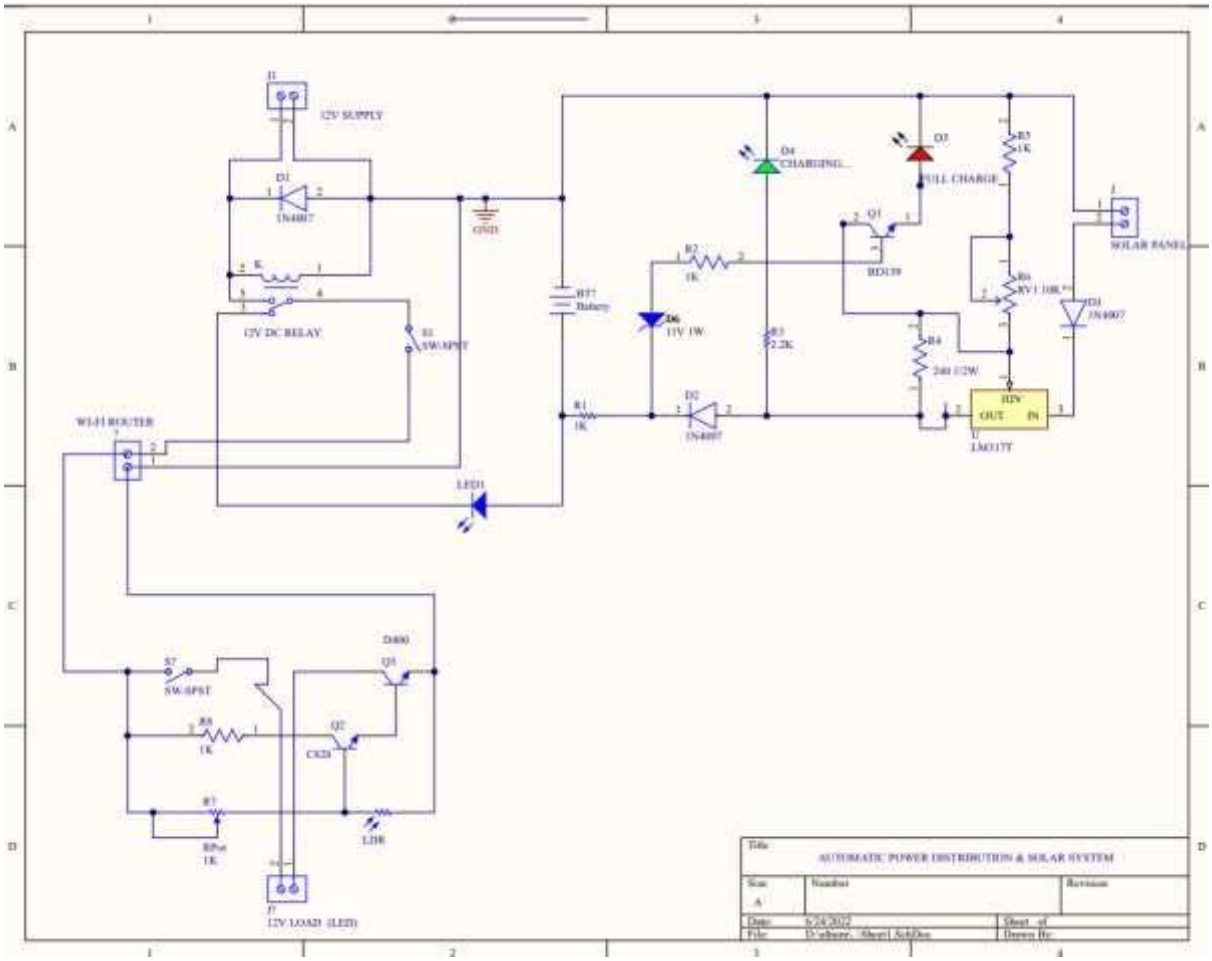
56 responses



So we decide the components in the product and design the product with in that cost.

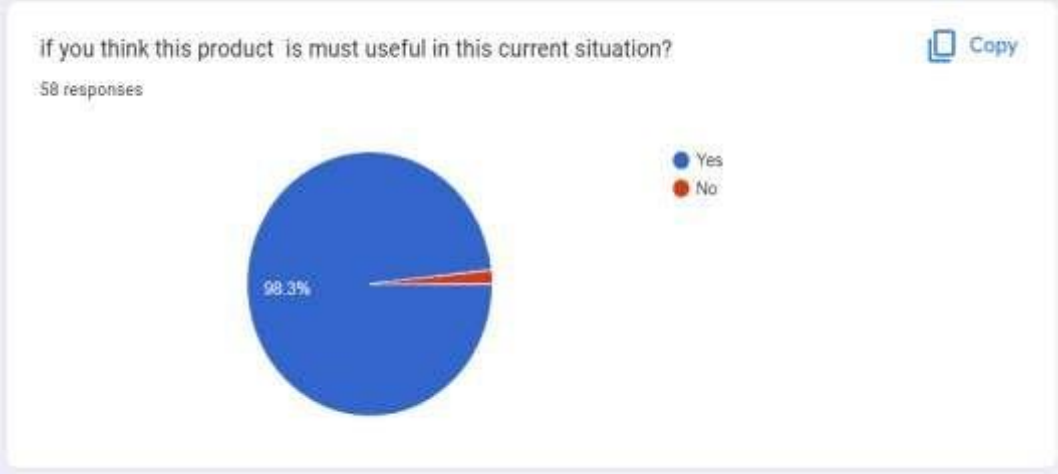


Here, we use simple and reasonable components to design this product. such as solar panel, sensors, battery, diodes, resistors, transistors and relay component.

With this we can operate automatic Wi-Fi and a automatic LED .and we can connect any other devices also per users request.

At the end of the survey we asked the users to rate our product with Yes or No. They understand the all facts and accept our product and they provide a good feedback for us.

Finally , consider some normal issues and facts we rate our project about 8 out of 10.



From this project we assume that we can generate the electric power from a renewable energy and we can eliminate the internet issues from the sudden power cut for Wi-Fi's.

-THANK YOU-

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