PROPOSAL

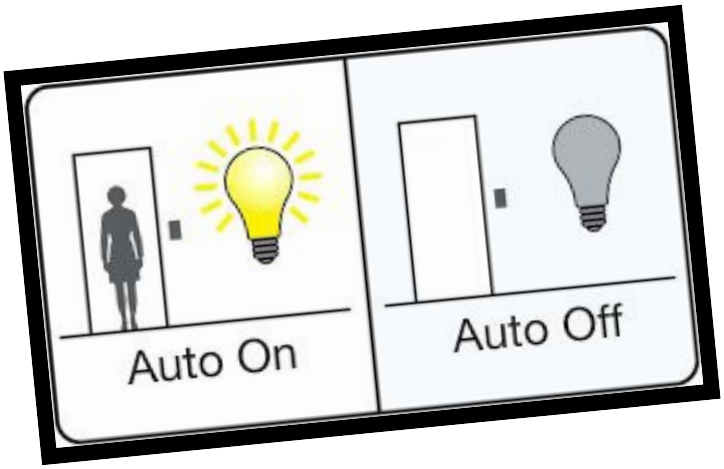
Interactive Room

GROUP CODE : T12

	Member 1	Member 2	Member 3
Full Name	**Vishrut Arora**	**Anisha Bansal**	**Deepanshu Chauhan**
Roll Number	**2019399**	**2019234**	**2019357**
IIITD Email ID	**vishrut19399@iiitd.ac.in**	**anisha19234@iiitd.ac.in**	**deepanshu19357@iiitd.ac.in**

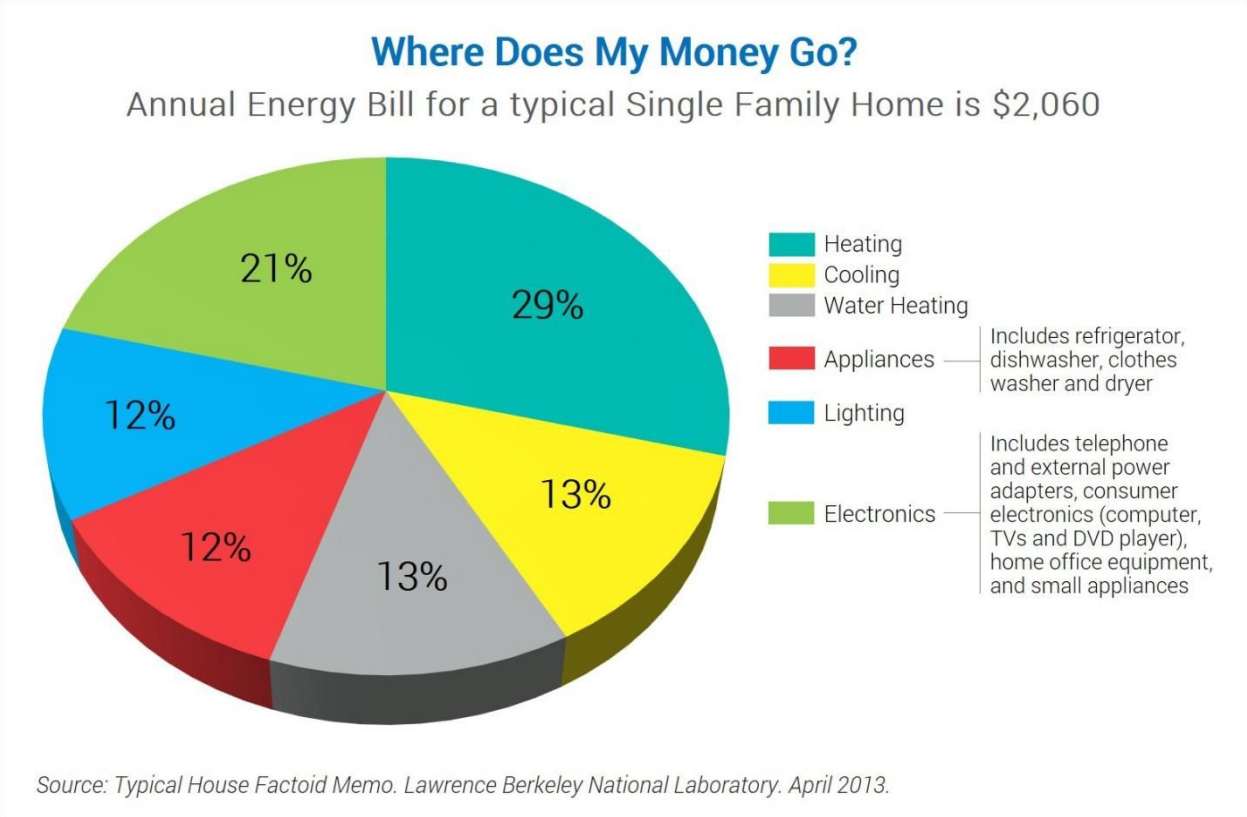
PROBLEM STATEMENT

The major problem which hinders the sustainable development in our country is the wastage and injudicious use of electricity in almost every household and organization. The main reason behind such huge amount of wastage is the lack of time and carelessness of the human beings. People get too busy with their lives that they forget to switch a button off. Even if we do we are not able to control the air inside the room to match the heat index level and make us feel comfortable in all manners.Our project's objective is to solve this problem while reducing the human effort for the same. With this project we will be able to save electricity in a very efficient manner. This will also aim towards providing a solution to the problems faced by the people of rural areas by not receiving a 24/7 power supply and experiencing frequent power cuts.



PROOF OF SIGNIFICANCE OF THIS PROBLEM:

UPPCL had proposed hiking electricity tariffs by more than 25 percent for domestic consumers.
SERC announced an average tariff hike of 2.14 per cent across Punjab for 2019-20.
KERC announced a hike of 33 paise per unit for BESCOM customers.
Poor households do not have enough money to spend on everything so even a minute saving of money can help them a lot.
21% of the family electricity budget goes into electronics, 13% in cooling,12% in lighting and 29% in heating.



PROOF OF NOVELTY OF THE PROBLEM OR PROPOSED SOLUTION :

We need to save or conserve energy because most of the energy sources depend on,like coal and natural gas can't be replaced.Once we use them up,they are gone forever.Saving power is very important ,instead of using the power in unnecessary times it should be switched off.In any city multiple lights with different power are nevertheless high on consumption.Even after sunrise some are not switched off via human error.Over here we are avoiding the problem by

having an automatic system which turns on and off the lights at given time or when ambient light falls below a specific intensity.

Optimized Fan Performance:Identifying the best speed and direction to operate your fans can be difficult, especially during the spring and fall seasons when the temperatures,humidity or air pressure frequently fluctuate. The automation software calculates all of this for you and perfectly optimizes your fans' performance for the current climate.

Savings on heating and cooling:We offer optional control systems for the MacroAir Controller 10,25, and 50. With a comfort control thermostat that automatically maintains the room temperature by gauging the heat index, and then measures the temperature,humidity and atmospheric pressure between the ceiling and floor and calculates each fan's ideal fan speed.

If we couple our fans with air conditioning, the cooling effect created by the fans will enable you to set your thermostat higher while maintaining the same level of comfort. In the winter, the fans run in reverse to mix the heated air, eliminating hot and cold spots and decreasing your heating costs. Automation running on a power supply of 110-240v maximizes energy efficiency by lowering energy costs across your climate control solutions.

TENTATIVE TECHNICAL IMPLEMENTATION DETAILS

Ultrasonic is used to detect ambient light.If the ambient light is below a specific value the lights are turned on or when there is presence of a person.DHT11 and BMP180 sensors for controlling the speed of fan and 16*2 LCD for displaying temperature,humidity and fan speed.Arduino uno to make the sensors interact with respect to the software code thus implement the same in the hardware.

TIMELINE

https://docs.google.com/spreadsheets/d/1sFsTWswqUFHjp0h3xGgrRDLy2_BKJ9l4ZbkTr7npbiE/edit?usp=sharing

REFERENCE LIST

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