She the Force: Hack for Sustainability with tech solutions

ECO-VIEW

STREAM - ELECTRONICS AND COMMUNICATION ENGINEERING

3rd Year

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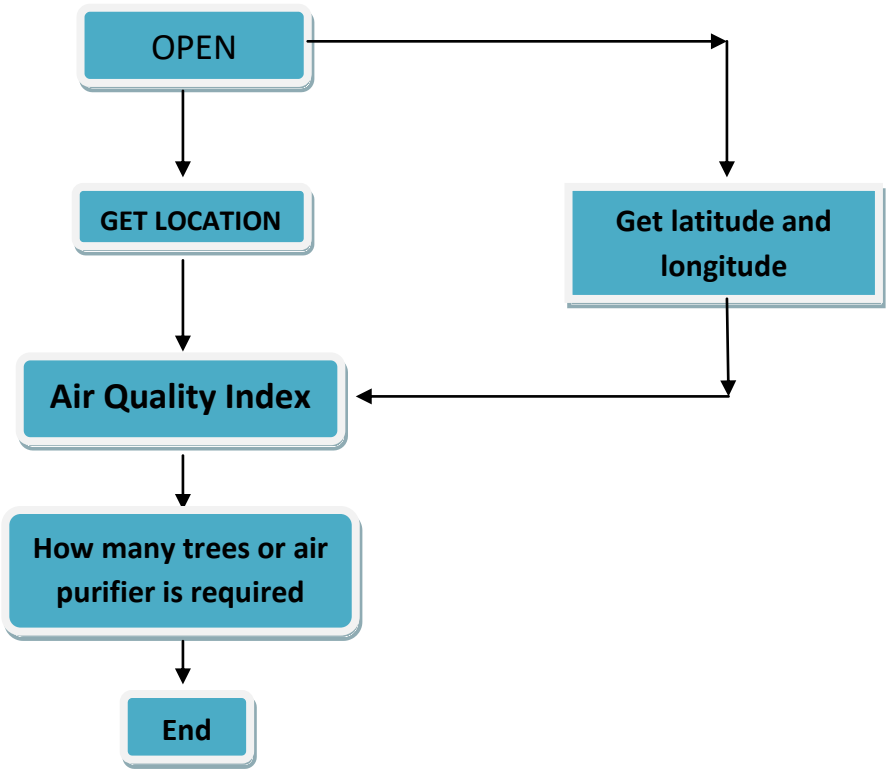
INTRODUCTION

We have created a web application which will tell us the Air Quality Index throughout the world. It will automatically fetch the longitude and latitude of our area and show the air quality of that area. It will also show the concentration of pollutants present in air like the amount of Carbon Monoxide, Nitrogen Monoxide, Nitrogen Dioxide, Ozone, Sulphur Dioxide etc. This web application will also tell us how many trees and air purifieres needed in that area. It is not possible to plant trees in densely populated area. The air quality of Industrial and highly populated are like big cities are very poor. Car emissions, chemicals from factories, dust and mold spores may be suspended as particles. Ozone, a gas, is a major part of **air pollution** in cities.Air pollution may cause diseases, allergies and even death to humans. It may also cause harm to other living organisms such as animals and food crops, and may damage the natural environment (for example, climate change, ozone depletion or habitat degradation) or built environment (for example, acid rain). Both human activity and natural processes can generate air pollution. Human activities like deforestation, burning of fossilfuels etc. source are the main causes of pollution. Our main aim is to aware people about these things and also tell them to work on it and think on it. So that everyone can live a healthy life.

WORKING PRINCIPLE

We have build this application with the help of HTML, CSS and JAVASCRIPT language. It is not possible to plant trees in densely populated area. The air quality of Industrial area and highly populated area like big cities are very poor. So we've created air purifier. We just design the air filter in simulation version with Arduino, Gas Sensor, Connecting Wires, Resistor. Due to non availability of hardware components in this pandemic situation,we are unable to do it practically. Due to absence of Air purifier sensor and exhaust fan we are not able to make it properly. So we have made it through simulation. We just design the air filter in simulation version with Arduino, Gas Sensor, Connecting Wires and Resistor. We justdesigned the prototype of the air purifier in which when the harmful gas particle comes near the gas sensor the reading in the serial monitor get increases and vice-versa. In industrial area afforestation is needed but due to lack of places we use air purifier there .Our web application also tells us how many air purifier and how manytrees need to be planted in that area. Air purifier purify all the harmful chemicals from the air .So, this is kind of maintaining the air quality of that area.

FLOWCHART:



APPLICATION:

Benefits of an Air Purifier:-

- Relieves symptoms of Asthma
- Eliminates Harmful chemicals from Indoor Environments
- Neutralises unpleasant odours
- Reduces the chances of Airborne Diseases
- Improves sleep
- Removes harmful chemical
- Can increase life expectancy

CONCLUSION :

Through our project we want to make aware everyone about condition of environment. In many countries heart disease is a leading cause of death and even a small contribution from **air pollution** could mean a significant and important effect on public health. On an individual level, the risk to health from **air pollution** is very much smaller than that posed by active cigarette smoking or accidents.Solutions for reducing air pollutions- Use public transports, turn off the lights when not in use, Recycle and Reuse, No to plastic bags, Reduction of forest fires and smoking, Use of fans instead of **Air** Conditioner, Use filters for chimneys, Avoid usage of crackers.