Project Proposal:
Clean energy calculator

Eq5

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I. Introduction

With the usage of energy every day there will be a big demand for energy, with some countries deciding to use fossil fuels or Nuclear energy, it will cause a great deal of damage to the environment.

With the Clean energy calculator, we will be able to calculate and estimate the best optimate energy source which will give the move optimal and efficient flow of energy without harming the environment. Due to the diverse environment we live in we will use the Clean energy calculator to determine the best natural energy source for a specific area for those that will utilize that place to understand the best method of power to utilize.

The clean energy calculator will depend on different factors such as the flow of water, wind speed, time of day light exposed to, and Heat generated over time. Other factors will include the water wheel size, temperature, and time.

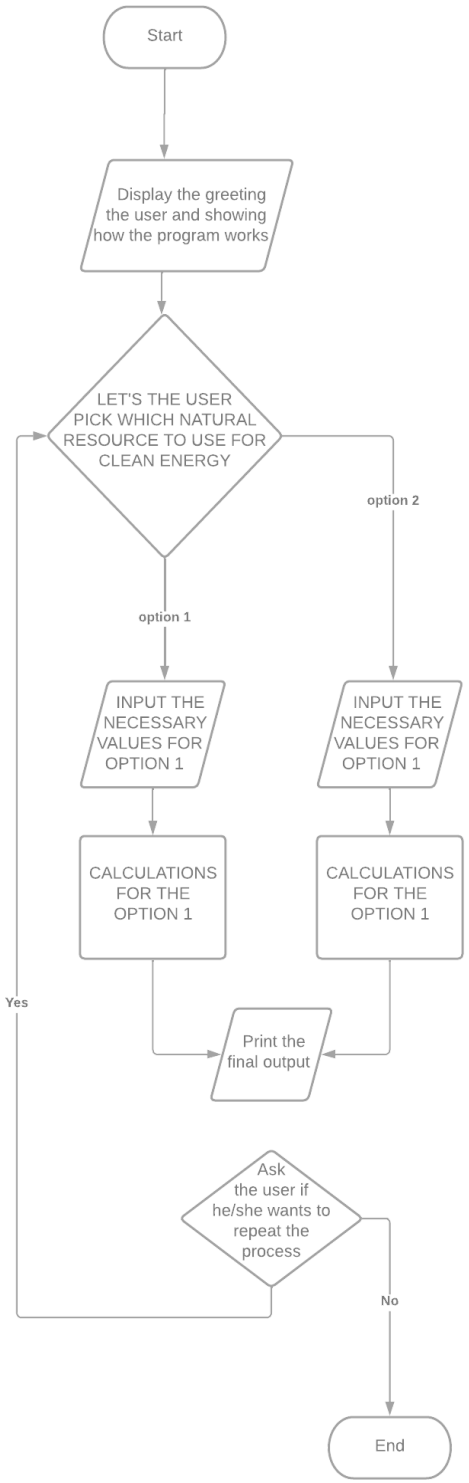
II. Methodology

We are able to accomplish this by using the Java programming language to create a program that will calculate the energy output of a certain natural resource and give an estimated amount of energy per hour. We will have five different types of codes for the program, one of the main inputs, and the other will be for calculations for each clean energy source. We will combine the five different codes to create one working program for the user to access.

One factor we have to consider is the calculations for each clean energy source since all of them are unique so we will have to consider the resources and accessibility of each resource and account for their different factors. We will limit our calculations to how much energy a natural resource could produce, since this is difficult to apply to water we will include the water wheel in the calculations for this program.

III. Project Description

Water	Pww=H∗Q∗g	Liters per hour
wind	1.1507794 * Windkt	Miles per hour
Temperature	$\frac{Q}{\Delta t} = -kA\frac{\Delta T}{\Delta x}$	Heat per hour
Time of day	Watts x time/ 1000	Kilowatts per hour



For the IPO, the group used the natural resources needed for the Clean Energy Calculator for the input of the program and each of their equations to be used in the program as well. Now for

the flowchart, the group constructed the flow of the program for the user and the processes that will be made while the user is using the program.

IV. Deliverables

Gantt Chart:

Project	People	Due Date	Status	Timeline
Planni... 1	OZ	~~Jun 26~~	Done	Jun 12 - 26
Resea...	OZ	Jul 10	Working on it	Jul 6 - 13
Design	OZ	Jul 14	Working on it	Jul 14 - 22
Imple...	OZ	Jul 24	Working on it	Jul 24 - 31
Follow...	OZ	Aug 3	Working on it	Jul 31 - Aug 2

The chart below shows an estimate of how the group will plan, design and implement the project of the Clean Energy Calculator. For the last week of June 2023 , the group will choose a theme/idea given by the professor and plan how they will make the project possible. For the entirety of July, the group will research all about Clean Energy and how it can be calculated by the factors of different natural resources. After researching, the design of the project comes next. The group will design how the calculations can be made using Java and how many files needed for the project. Designing can also help the group analyze the project more on a perspective from the user who will be going to use it. After this, the group proceeds for the implementation of the project. The group will try to compile the program codes used for the Clean energy Calculator and also make a trial error if the program works properly. Lastly, the follow-up part will be reserved for any mistakes that were overlooked or any improvements that can be made before the deadline.

V.Evaluation

The metrics we will be using for each natural energy source will be liters, miles, heat(campfires or natural heat), time of day, the size of the water wheel in diameters, and kilowatts. They will all follow the same time frame of power per hour, the reason for this is the be able to make a noticeable comparison between all the different natural energy sources and conclude the best energy source for the specific location.

VI. Conclusion

With other smaller and more underdeveloped parts of the world lack the ability and resources to utilize the project will help researchers or outdoor campers to optimize their resources and use the best resources available to them at the moment. This program will be available for all classes to utilize and create an easier way to plan ahead.

VII. References

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