ACTIVITY-1

PROBLEM STATEMENT-DESIGN A C PROGRAM
TO SIMULATE THE OPERATION OF AN
ELECTRICAL SWITCH WHERE PROGRAM
TAKES INPUT VALUES AS 1 OR 0 AND IDEATE A
PROBLEM AND PROVIDE ITS SUBESEQUENT
SOLUTION.

RESEARCH

For the above problem statement,we can use the the traditional operational methods of if-else statements and switch cases.

These two are also known as conditional statements which by definition means these operators or syntax types can only be executed when either of the one condition is satisfied.

The basic syntax of if-else statements is-
if
("Conditon 1"){
cout<<" (Feasible output)"
}
else
("Condition 2"){
cout<<"Feasible output"
}

This information can also be cross verified by cross checking with verified websites such as
https://www.geeksforgeeks.org/c/c-if-else-statement/

ANALYZE

Analysis of any problem leads to a much better,user-friendly and feasible solution which in turn could help the user in solving the problem more efficiently and quickly . My topic is warning against overloading of lift.For which I will create a simple program to give warning about overloading of the elevator using if else statements

IDEATE

My program will be simple and be as follows
1)Input the weight of people and no.of people in the lift
2)Set a weight limit for smooth operation of the elevator
3)Using if else condition the machine will tell the user whether it is safe to travel or not
4) eXIT THE PROGRAM.

BUILD

In this part,the actual code is built and executed.The code is as follows.

```c
#include<stdio.h>
void main(){
    int people;
    int weight;
    int total;
    printf("Please enter the number of people boarding the elevator \n");
    scanf("%d", & people );
    printf("Please enter weight of people \n");
    scanf("%d",& weight);
    total=people*weight;
    printf("The total weight of the lift is %d \n",total);
    if(total<500){
        printf("You are safe to board the elevator \n");
    }
    else{
        printf("Elevator is overloaded!Please board on the nest ride
\n }
}
```

TESTING

The program is executed and tested on an online C compiler known as programiz.The programme consists of 2 cases-

levator is overloaded!Please board on the nest ride \n");

CASE 1-THE LIFT IS SAFE TO BOARD
Output=Please enter the number of people boarding the elevator
6
Please enter weight of people
75
The total weight of the lift is 450
You are safe to board the elevator

CASE 2- THE IS OVERLOADED AND NOT SAFE FOR BOARDING
Output=Please enter the number of people boarding the elevator
10
Please enter weight of people
55
The total weight of the lift is 550
Elevator is overloaded!Please board on the nest ride

IMPLEMENT

The elevator safety program is published on "GITHUB"
for easy accessibility
Link-