ACTIVITY 1:-

Simulation of electrical switch

Design a c program to simulate an operation of electrical switch where the program takes the input values either 0 or 1 representing the switch being off or on respectively. Using the suitable condition statement the program should interpret the input values and display the corresponding condition as on or off. Additionally the program should handle invalid input values and provide appropriate error messages

STAGE 1:- RESEARCH

Referred website :- [reedsensor.com](http://reedsensor.com)

I got to know electrical switches can be applied in medical device such one device is

HEARING DEVICE

As widely known, Hearing devices designed to improve hearing by making sound audible to a person who is in a crowded place like outdoor where there is a lot of traffic. The device which will be useful will be the hearing aid device in which the device will amplify the or filter the sound based on the surrounding and if the person is indoors there is no need for the device hence it will be turned off.

STAGE 2:- ANALYSIS

Logical representation of switch

1. OUTDOOR - Switch is ON

(0) INDOOR- Switch is OFF

Conditions to be used

if else condition

If input mode is outdoor then switch is ON

Else input mode is indoor then switch is OFF

STAGE:- 3 IDEATE

There will be two modes

INDOOR :- THE DEVICE WILL GET TURN OFF

OUTDOOR:- THE DEVICE WILL GET TURN ON

ALGORITHM

Start

Read input values (either 0 or 1)

If input mode outdoor :- display ON

Else input mode indoor :- display OFF

If else input :- display invalid enter either INDOOR OR OUTDOOR

Stop

STAGE 4:- BUILT

#include <stdio.h>

int main() {

int sw;

printf("enter 0 for indoor and 1 for outdoor");

scanf("%d" ,&sw);

if(sw == 1){

printf("switch is ON\n");

}

else if(sw == 0){

printf("switch is OFF\n");

}

return 0;

}

STAGE 5:- TEST

enter 0 for indoor and 1 for outdoor0

switch is OFF

enter 0 for indoor and 1 for outdoor1

switch is ON

STAGE 5:- Implementation