Text

Description automatically generated

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#include <stdio.h>

#include <string.h>

#include <math.h>

//function prototypes

float time();

float roundup(float time);

float electricity(float roundup);

void end(float roundup, float electricity);

//global variables.

float dayrate = 23.9;

float nightrate = 12.6;

float ft;

float rt;

float r;

//The main function that runs all other functions & contains vars used in such functions

void main() {

time();

roundup(ft);

electricity(rt);

end(rt, r);

}

//calculating time.

float time() {

float hour;

float min;

printf("Enter hour of time: ");

scanf\_s("%f", &hour);

if (hour < 0) {

hour = 00;

}

else if (hour >= 24) {

hour = 23;

}

printf("Enter minute of time: ");

scanf\_s("%f", &min);

if (min < 0) {

min = 01;

}

else if (min >= 60) {

min = 00;

}

min = min / 60;

ft = hour + min;

printf("Final time is: %0.2f \n", ft);

return ft;

}

//round time up.

float roundup(float ft) {

rt = ceil(ft);

printf("Rounded time is: %0.2f \n", rt);

return rt;

}

//calculating electricity rate.

float electricity(float rt) {

r = (rt >= 8.00 && rt < 11.59) ? dayrate : nightrate;

return r;

}

//printing electricity rate.

void end(float rt, float r) {

printf("Electricity price at %0.2f is %0.2f. \n", rt, r);

}