DCRESIDTANCE & ACRESISTANCE CLASS DESCRIPTION

DCRESISTANCE CLASS

This resistance class stores various functions and variables that will help in the calculation of resistance, total current and total power drawn for a DC circuit (series, parallel or series parallel).

Variables (Private)

double R, I

double R- This was used to store the resistance value

double I-This was used to store the Total current value.

Variables

t, n, double V, double P

t- This was used to store a value that would allow the user to make a choice between calculation of resistors in series, parallel or series parallel.

n- This was used to store the number of resistors in a branch for resistors in series, parallel or series parallel.

double V- This was used to store the voltage to calculate total current.

double P- This was used to store the total power after using total current and total resistance to find total power

Functions

dcresistance(); - This function was used to initialised certain variables to 0 and it is also called the constructor function

double ToResistance();-This function was used to calculate total resistance in a DC in series, parallel and series parallel.

double seR();-This function was used to calculate total resistance in a DC series circuit by adding them to their one another and then displaying the total resistance value to screen.

double paR(); - This function was used to calculate total resistance in a DC parallel circuit and adding them to their one another; then finding the reciprocal and then displaying the total resistance value to screen.

void se();-This function was used to store if the connection is series without returning a value.

void pa ();-This function was used to store if the connection is parallel without returning a value.

void sepa(); -This function was used to store if the connection is series-parallel without returning a value.

void ToCurrent ();-This function was used to store the total current without returning a value.

void Topower ();-This function was used to store the total power without returning a value.

ACRESISTANCE CLASS

This resistance class stores various functions and variables that will help in the calculation of impedance, total current and power drawn for an AC circuit (series, parallel or series parallel).

Variables (Private)

double realZ, imagZ ,magZ, angZ;
double realI, imagI, magI, angI;
double realP ,imagP, magP, angP
double fs

real Z- This was used to store the real value for resistance in an ac circuit.

imag Z- This was used to store the imaginary value for resistance in an ac circuit.

mag Z- This was used to store the magnitude value for resistance in an ac circuit.

ang Z- This was used to store the Angle for resistance in an ac circuit.

real I- This was used to store the real number value for current in an ac circuit.

imag I- This was used to store the imaginary number value for current in an ac circuit.

mag I- This was used to store the magnitude value for current in an ac circuit.

ang I- This was used to store the angle for current in an ac circuit.

real P- This was used to store the real number value for power in an ac circuit.

imag P- This was used to store the imaginary number value for power in an ac circuit.

mag P- This was used to store the magnitude value for power in an ac circuit.

ang P- This was used to store the angle for power in an ac circuit.

fs-The variable for the frequency for the series-parallel function

Variables

t, n, l, m, double R, double Xc, double Xl, double f , V

t- This was used to store a value that would allow the user to make a choice between calculation of resistors in series, parallel or series parallel.

n- This was used to store the number of resistors in a branch for resistors in series, parallel or series parallel.

l- This was used to store the value of each inductor in series.

m- This was used to store the value of each capacitor in series.

double R- This was used to store the total resistance of an AC circuit.

double Xc- This was used to store the total Capacitive Reactance of an AC circuit.

double Xl- This was used to store the total Inductive Reactance of an AC circuit.

double F- This is used to store the Frequency.

double V- This was used to store the voltage to calculate total current.

Functions

acresistance(); - This function was used to initialised certain variables to 0 and it is also called the constructor function

double ToResistance();-This function was used to calculate total resistance in a AC in series, parallel and series parallel.

double seR();-This function was used to calculate total resistance in a AC series circuit by adding them to their one another and then displaying the total resistance value to screen.

double paR(); - This function was used to calculate total resistance in a AC parallel circuit and adding them to their one another; then finding the reciprocal and then displaying the total resistance value to screen.

void se();-This function was used to store if the connection is series without returning a value.

void pa ();-This function was used to store if the connection is parallel without returning a value.

void sepa(); -This function was used to store if the connection is series-parallel without returning a value.

void ToCurrent ();-This function was used to store the total current without returning a value.

void Topower ();-This function was used to store the total power without returning a value