#include<stdio.h>

#include<conio.h>

void main()

{

float v\_in,v\_out,i\_in,i\_out,p\_in,p\_out;

float v\_gain,i\_gain,p\_gain,r\_in,r\_out;

int choice,choicep;

printf("Enter 1 to calculate voltage gain,2 for curretn gain,3 for power gain,4 for input resistance,5 for output resistance");

printf("\nchoose an operation to perform(1,2,3,4,5):");

scanf("%d",&choice);

switch(choice)

{

case 1:

printf("\nEnter the values of input voltage and output voltage of a given amplifier:\n");

scanf("%f%f",&v\_in,&v\_out);

v\_gain=v\_out/v\_in;

printf("\nVoltage gain of a given amplifier is:%f",v\_gain);

break;

case 2:

printf("\nEnter the values of input current and output current of a given amplifier:\n");

scanf("%f%f",&i\_in,&i\_out);

i\_gain=i\_out/i\_in;

printf("\nCurrent gain of a given amplifier is:%f",i\_gain);

break;

case 3:

printf("\nEnter 1 to calculate wrt input power and output power,2 wrt voltage gain and current gain,3 wrt input and output voltage and input and output current");

printf("\nEnter the choice:");

scanf("%d",&choicep);

if(choicep==1)

{

printf("\nEnter the values of input power and output power of a given amplifier:\n");

scanf("%f%f",&p\_in,&p\_out);

p\_gain=p\_out/p\_in;

printf("\nPower gain of a given amplifier is:%f",p\_gain);

}

else if(choicep==2)

{

printf("\nEnter values of voltage gain and current gain:");

scanf("%f%f",&v\_gain,&i\_gain);

p\_gain=v\_gain\*i\_gain;

printf("\nPower gain of a given amplifier is:%f",p\_gain);

}

else if(choicep==3)

{

printf("\nEnter values of input and ouput voltage and input and output current:\n");

scanf("%f%f%f%f",&v\_in,&v\_out,&i\_in,&i\_out);

p\_gain=(v\_out\*i\_out)/(v\_in\*i\_in);

printf("\nPower gain of a given amplifier is:%f",p\_gain);

}

break;

case 4:

printf("Enter the values of input voltage and input current of a given amplifier:");

scanf("%f%f",&v\_in,&i\_in);

r\_in=v\_in/i\_in;

printf("\nInput Resistance of a given amplifier:%f",r\_in);

break;

case 5:

printf("\nEnter the values of output voltage and output current of a given amplifier:\n");

scanf("%f%f",&v\_out,&i\_out);

r\_out=v\_out/i\_out;

printf("\nOutput Resistance of a given amplifier is:%f",r\_out);

break;

default:

printf("\nEnter correct choice");

break;

}

}