

PREPARED BY:

Hamza mohammed

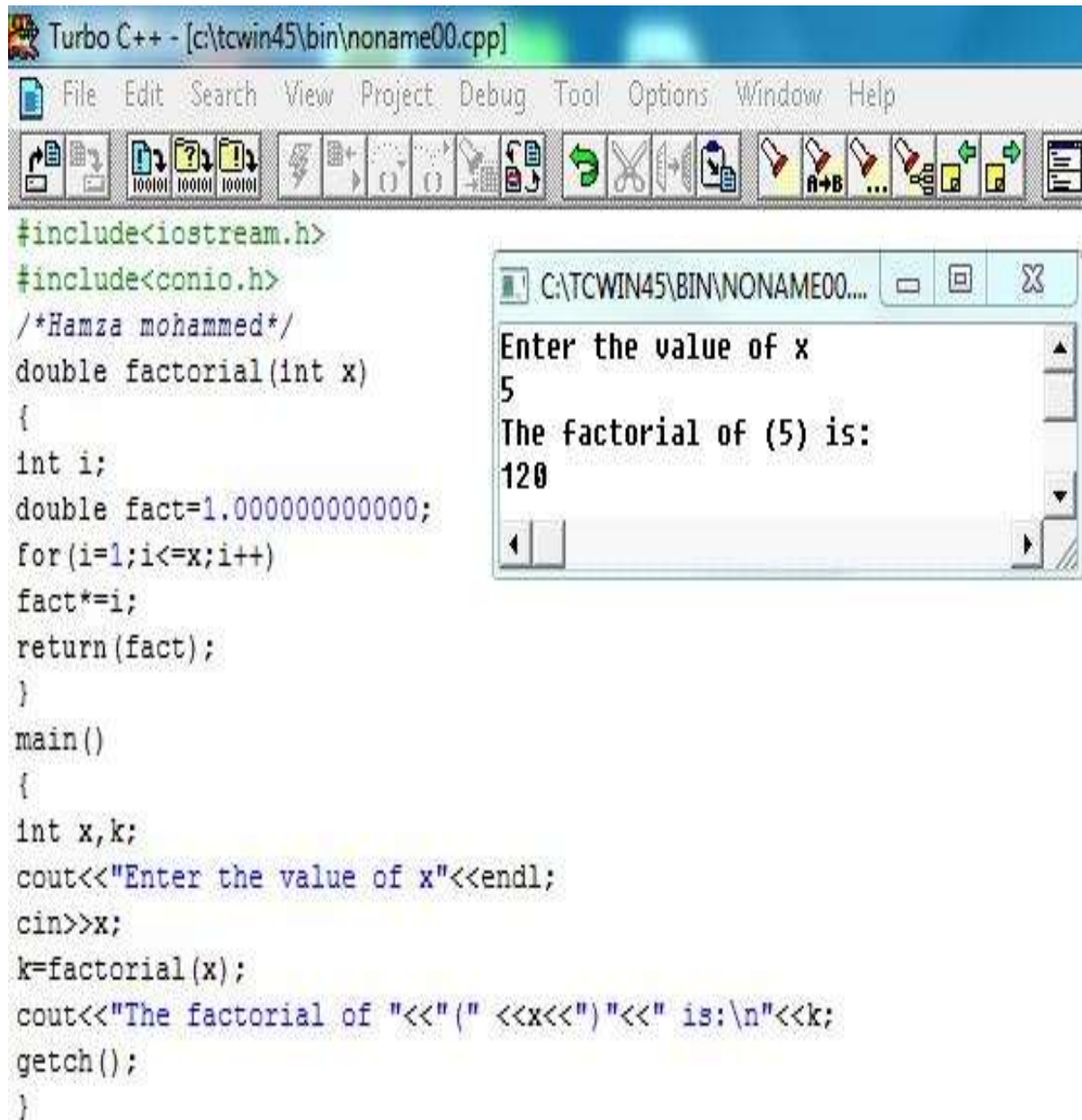
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Q1_by use c++ creat a function to find factorial of any number

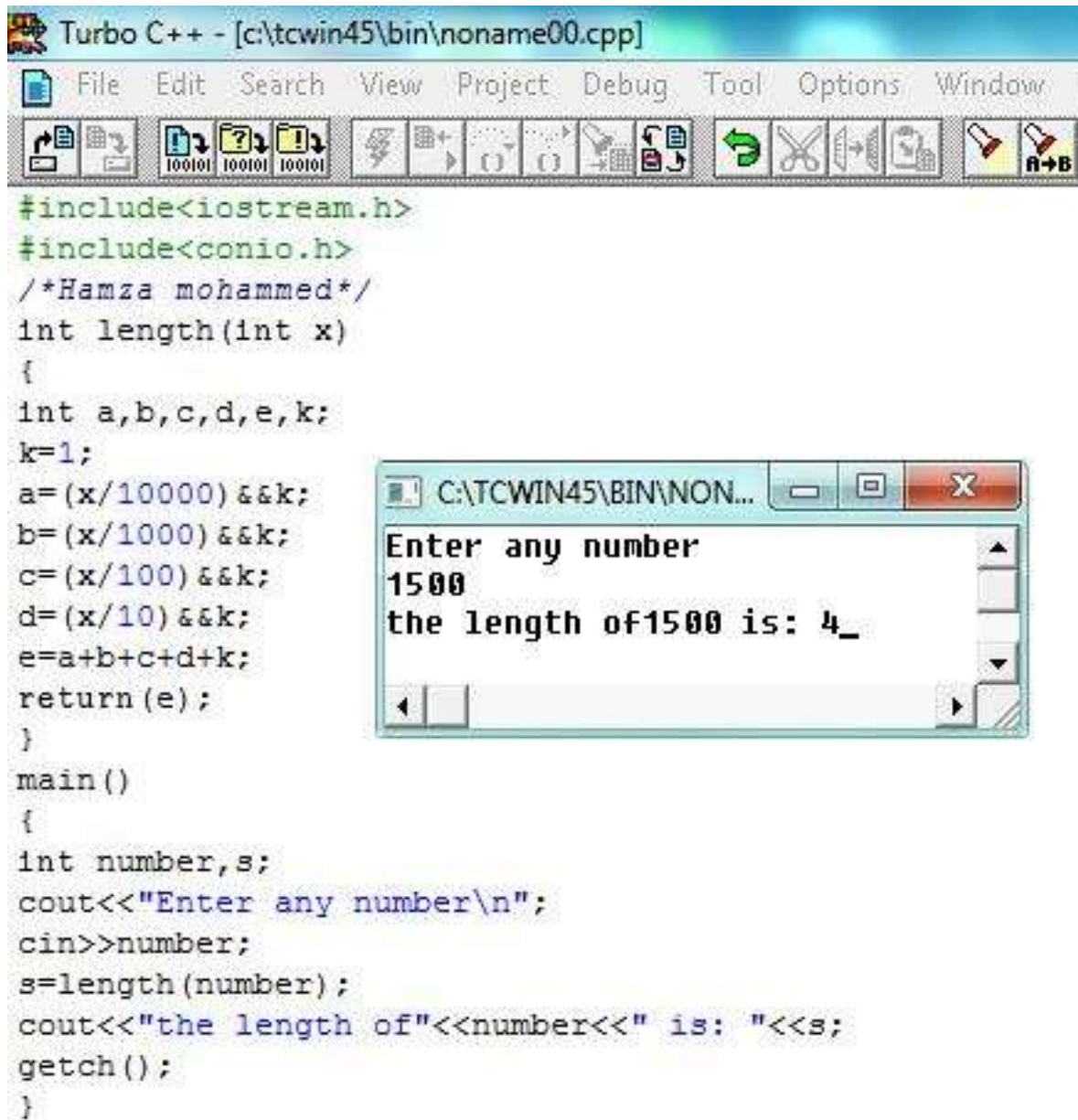


The image shows a screenshot of the Turbo C++ IDE. The main window displays the source code for a C++ program that calculates the factorial of a number. The code includes headers for `iostream.h` and `conio.h`, and a comment identifying the author as Hamza Mohammed. The `factorial` function is defined to take an integer `x` and return its factorial. The `main` function prompts the user to enter a value for `x`, reads the input, calls the `factorial` function, and prints the result. The output window shows the program's execution: the user enters 5, and the program outputs "The factorial of (5) is: 120".

```
#include<iostream.h>
#include<conio.h>
/*Hamza mohammed*/
double factorial(int x)
{
int i;
double fact=1.0000000000000000;
for(i=1;i<=x;i++)
fact*=i;
return (fact);
}
main()
{
int x,k;
cout<<"Enter the value of x"<<endl;
cin>>x;
k=factorial(x);
cout<<"The factorial of "<<"(" <<x<<")"<<" is:\n"<<k;
getch();
}
```

C:\TCWIN45\BIN\NONAME00...
Enter the value of x
5
The factorial of (5) is:
120

Q2_write c++ program to find the length of any integer number by using function ?



The image shows a screenshot of the Turbo C++ IDE. The main window displays the source code for a C++ program. The code includes headers for `iostream.h` and `conio.h`, and a comment `/*Hamza mohammed*/`. A function `length` is defined, which takes an integer `x` and returns its length by summing the number of digits in each place value (thousands, hundreds, tens, and units) plus a constant `k=1`. The `main` function prompts the user to enter a number, reads the input, calls the `length` function, and prints the result.

```
#include<iostream.h>
#include<conio.h>
/*Hamza mohammed*/
int length(int x)
{
int a,b,c,d,e,k;
k=1;
a=(x/10000) && k;
b=(x/1000) && k;
c=(x/100) && k;
d=(x/10) && k;
e=a+b+c+d+k;
return (e);
}
main()
{
int number,s;
cout<<"Enter any number\n";
cin>>number;
s=length(number);
cout<<"the length of"<<number<<" is: "<<s;
getch();
}
```

An inset window titled `C:\TCWIN45\BIN\NON...` shows the program's execution. It displays the prompt `Enter any number`, the user input `1500`, and the output `the length of1500 is: 4_`.

Q3_write c++ program to perform the following:

1_sum of 9 numbers

2_Average of 9 numbers

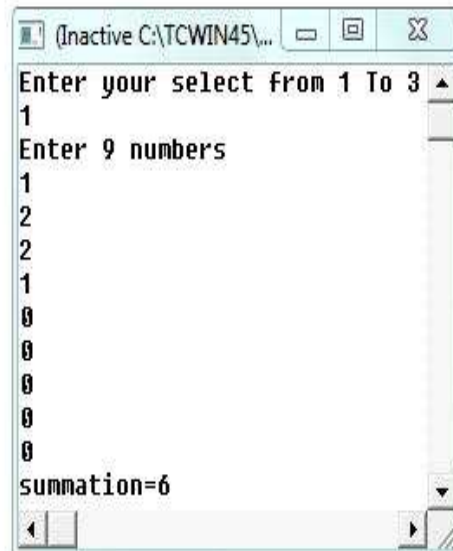
3_product of 9 numbers

Else where display any comment

Hint:using function and switch case

Hamza mohammed

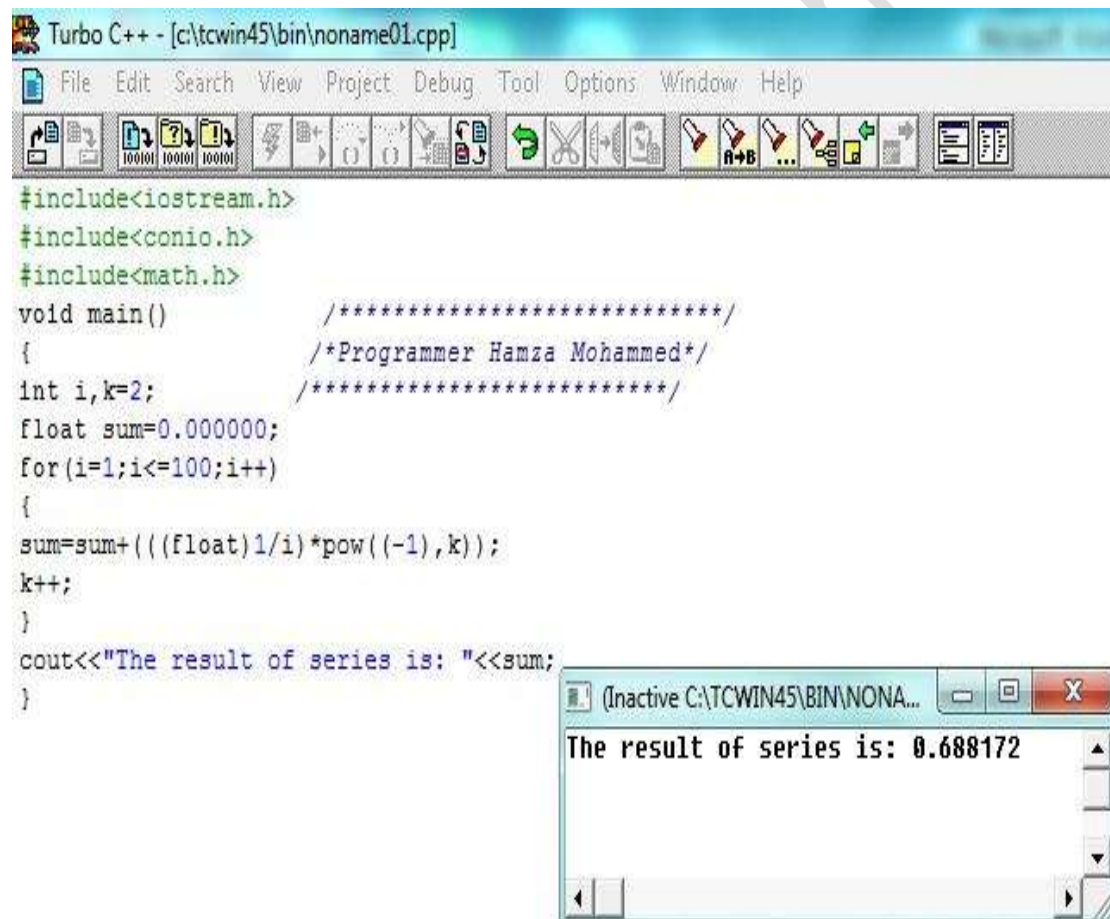
```
Turbo C++ - [c:\tcwin45\bin\noname01.cpp]
File Edit Search View Project Debug Tool Options Window Help
10000 10000 10000
#include<iostream.h>
#include<conio.h>
int summation(int x[9])
{int i,s=0;
for(i=0;i<9;i++)
s=s+x[i];
return(s);}
float Average(int x[9])
{int i,s=0;float c;
for(i=0;i<9;i++)          /******/
s=s+x[i];                 /*Programmer Hamza mohammed*/
c=(float)s/9;             /******/
return(c);}
float prod(int x[9])
{int i;float f=1;
for(i=0;i<9;i++)
f=f*x[i];
return(f);}
main(){
int d[9],i,select;
cout<<"Enter your select from 1 To 3"<<endl;
cin>>select;
cout<<"Enter 9 numbers"<<endl;
for(i=0;i<9;i++)
cin>>d[i];
switch(select){case 1:
cout<<"summation="<<summation(d);
break;
case 2:
cout<<"Average="<<Average(d);
break;
case 3:
cout<<"product="<<prod(d);
break;
default :
cout<<"Check your enter";
}
getch();}
```



Q4/

Write a C++ program to get the sum of the series

$$SUM = 1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \dots + \frac{1}{99} - \frac{1}{100}$$



The image shows a screenshot of the Turbo C++ IDE. The main window displays the following C++ code:

```
#include<iostream.h>
#include<conio.h>
#include<math.h>
void main()
{
    int i,k=2;
    float sum=0.000000;
    for(i=1;i<=100;i++)
    {
        sum=sum+(((float)1/i)*pow((-1),k));
        k++;
    }
    cout<<"The result of series is: "<<sum;
}
```

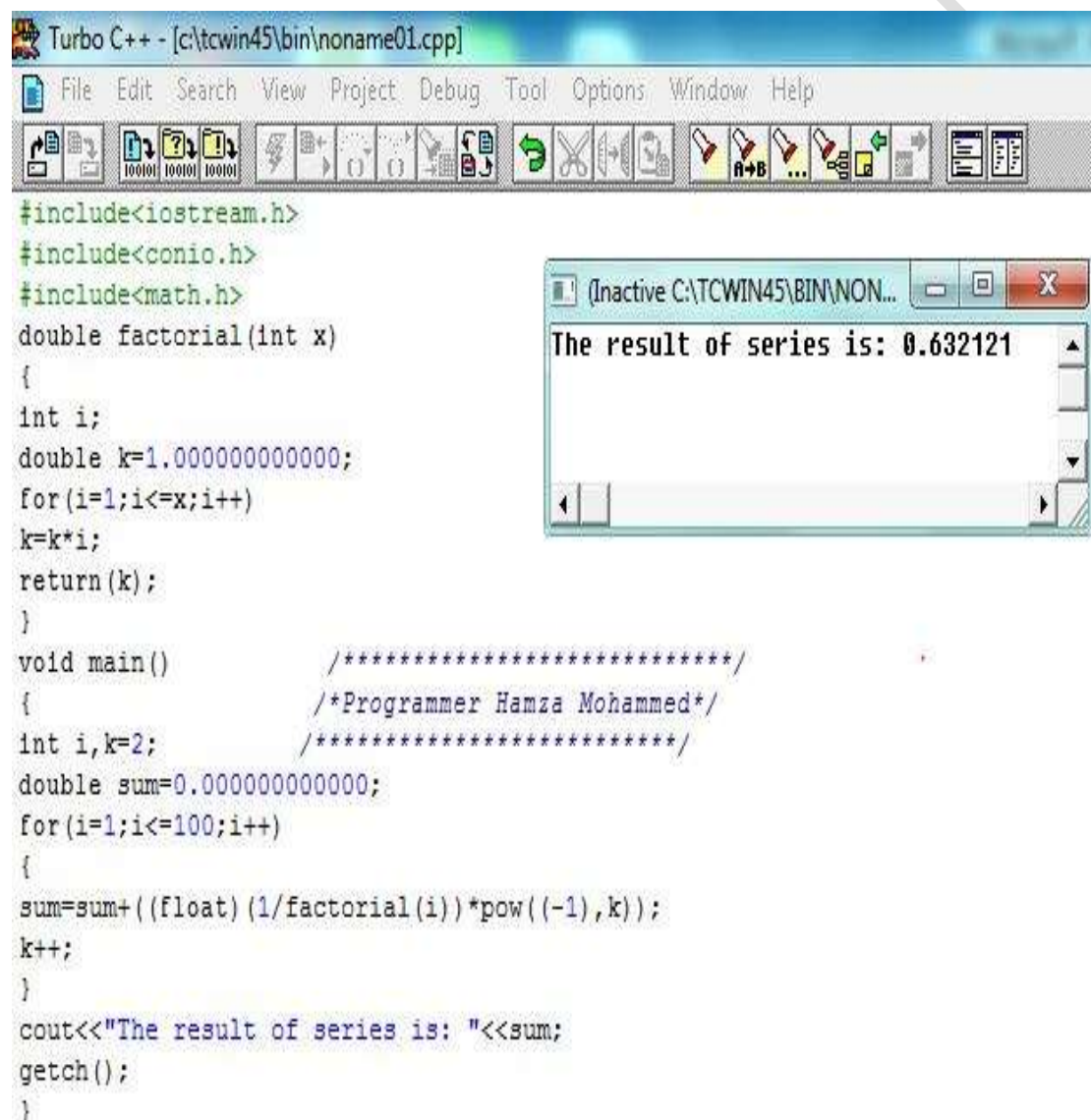
The output window shows the result of the program execution:

```
The result of series is: 0.688172
```

Q5/

Write a C++ program to get the sum of the series

$$SUM = 1 - \frac{1}{2!} + \frac{1}{3!} - \frac{1}{4!} + \dots + \frac{1}{99!} - \frac{1}{1000!}$$

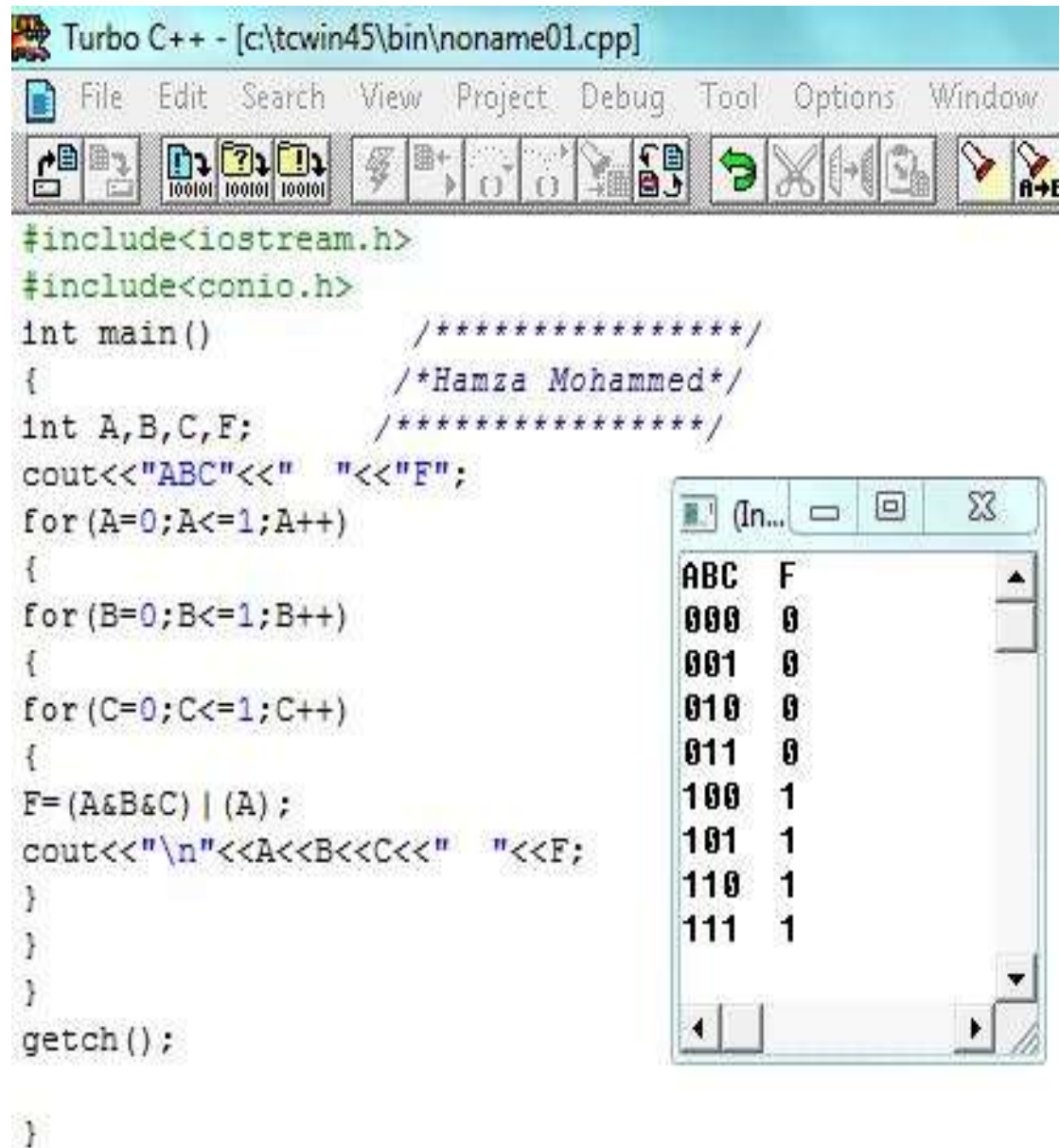


The image shows a screenshot of the Turbo C++ IDE. The main window displays the source code for a C++ program that calculates the sum of the series. The code includes headers for `iostream.h`, `conio.h`, and `math.h`. It defines a `factorial` function and a `main` function. The `main` function iterates from `i=1` to `i=100`, calculating the sum of the series terms. The output window shows the result: "The result of series is: 0.632121".

```
#include<iostream.h>
#include<conio.h>
#include<math.h>
double factorial(int x)
{
int i;
double k=1.0000000000000000;
for(i=1;i<=x;i++)
k=k*i;
return(k);
}
void main()
{
int i,k=2;
double sum=0.0000000000000000;
for(i=1;i<=100;i++)
{
sum=sum+((float)(1/factorial(i))*pow((-1),k));
k++;
}
cout<<"The result of series is: "<<sum;
getch();
}
```

The result of series is: 0.632121

Q6/Design the logical equation by use C++
 $F=ABC+A$



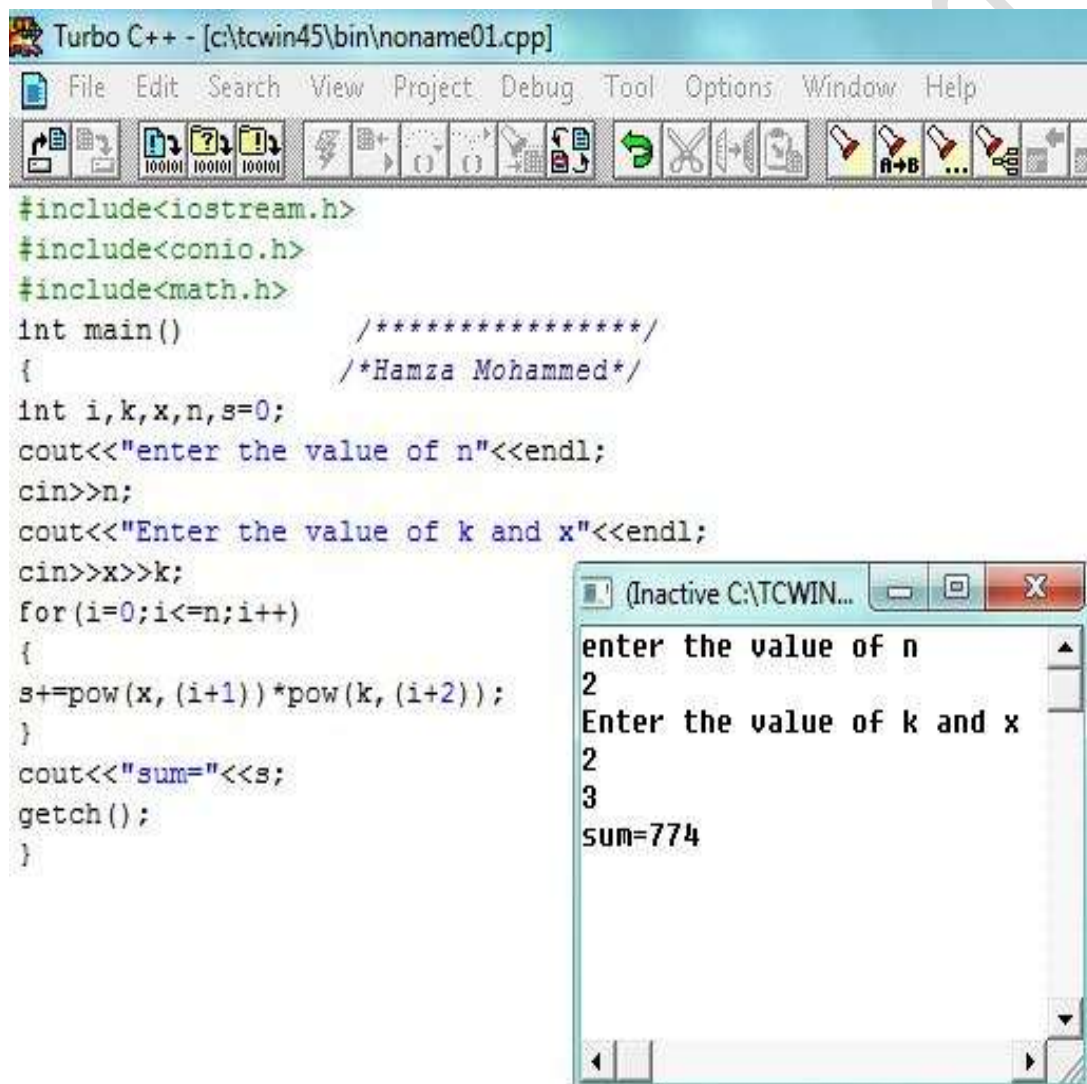
```
Turbo C++ - [c:\tcwin45\bin\noname01.cpp]
File Edit Search View Project Debug Tool Options Window
100101 100101 100101
#include<iostream.h>
#include<conio.h>
int main()          /*******/
{                  /*Hamza Mohammed*/
int A,B,C,F;       /*******/
cout<<"ABC"<<" " <<"F";
for (A=0;A<=1;A++)
{
for (B=0;B<=1;B++)
{
for (C=0;C<=1;C++)
{
F=(A&B&C) | (A);
cout<<"\n"<<A<<B<<C<<" " <<F;
}
}
}
getch();

}
```

ABC	F
000	0
001	0
010	0
011	0
100	1
101	1
110	1
111	1

Q7/write C++ program to find the result of series below

$$\sum_{i=0}^n x^{i+1} * k^{i+2}$$



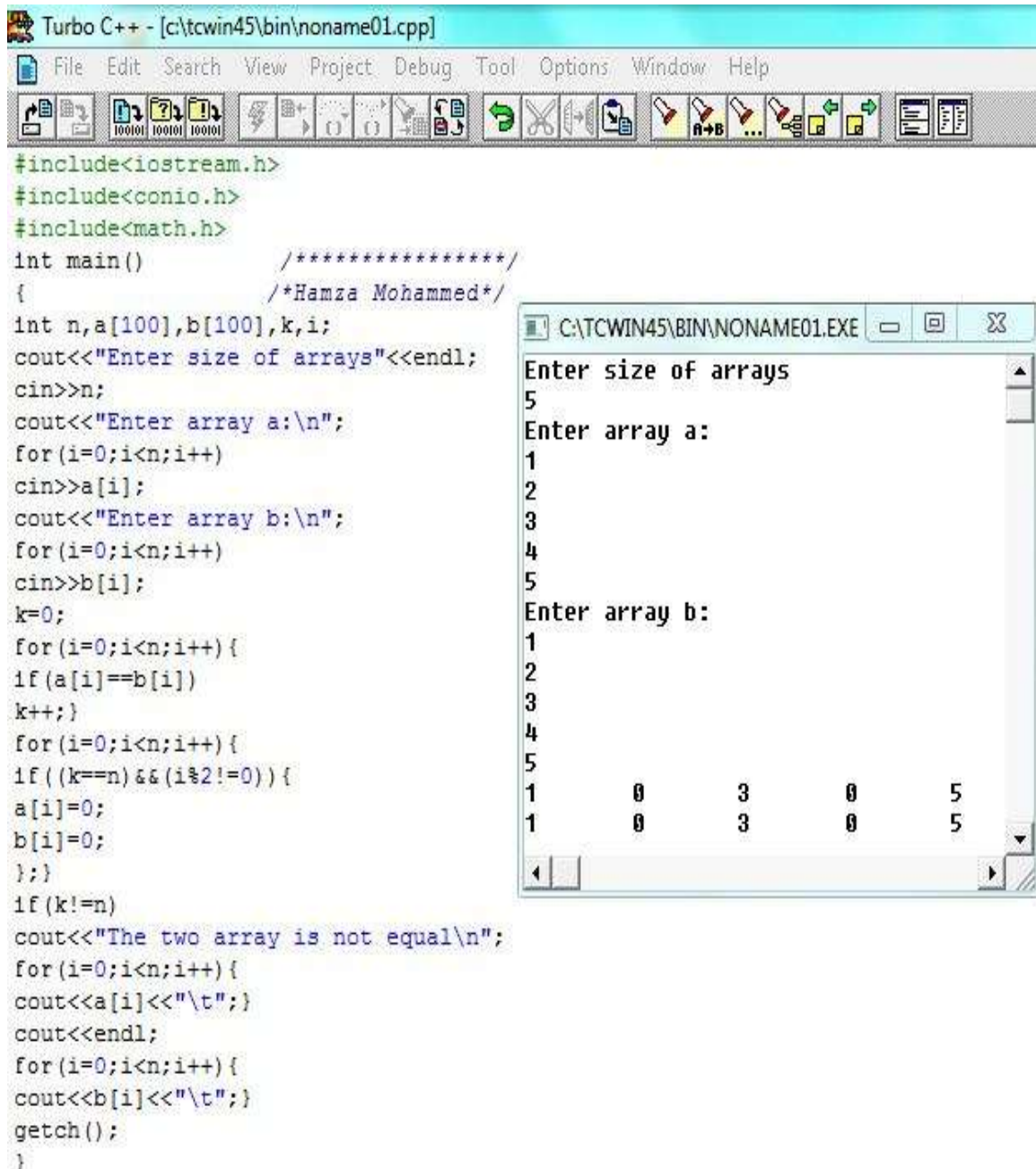
The image shows a screenshot of the Turbo C++ IDE. The main window displays the following C++ code:

```
#include<iostream.h>
#include<conio.h>
#include<math.h>
int main()          /******/
{                  /*Hamza Mohammed*/
int i,k,x,n,s=0;
cout<<"enter the value of n"<<endl;
cin>>n;
cout<<"Enter the value of k and x"<<endl;
cin>>x>>k;
for(i=0;i<=n;i++)
{
s+=pow(x, (i+1))*pow(k, (i+2));
}
cout<<"sum="<<s;
getch();
}
```

An output window titled "(Inactive C:\TCWIN..." is open in the foreground, showing the program's execution:

```
enter the value of n
2
Enter the value of k and x
2
3
sum=774
```

Q8/Enter two 1_D array has same size if the two array is equal clear the odd location of two array else display the two array is not equal



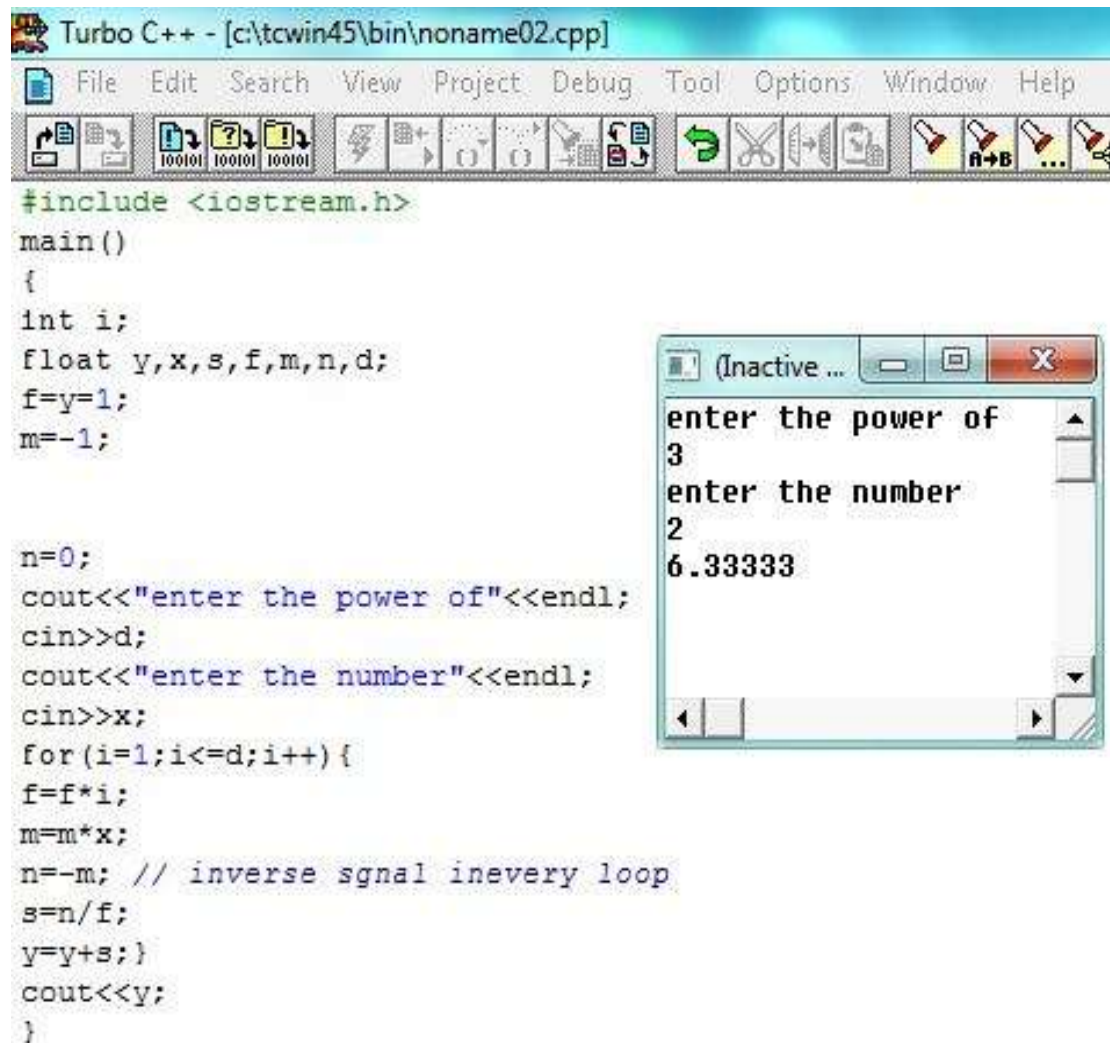
```
#include<iostream.h>
#include<conio.h>
#include<math.h>
int main()          /*******/
{                  /*Hamza Mohammed*/
int n,a[100],b[100],k,i;
cout<<"Enter size of arrays"<<endl;
cin>>n;
cout<<"Enter array a:\n";
for(i=0;i<n;i++)
cin>>a[i];
cout<<"Enter array b:\n";
for(i=0;i<n;i++)
cin>>b[i];
k=0;
for(i=0;i<n;i++){
if(a[i]==b[i])
k++;}
for(i=0;i<n;i++){
if((k==n) && (i%2!=0)) {
a[i]=0;
b[i]=0;
};}
if(k!=n)
cout<<"The two array is not equal\n";
for(i=0;i<n;i++){
cout<<a[i]<<"\t";}
cout<<endl;
for(i=0;i<n;i++){
cout<<b[i]<<"\t";}
getch();
}
```

C:\TCWIN45\BIN\NONAME01.EXE

Enter size of arrays
5
Enter array a:
1
2
3
4
5
Enter array b:
1
2
3
4
5
1 0 3 0 5
1 0 3 0 5

Q9/solve the equation below:

$$1 + \frac{x}{1!} + \frac{x^2}{2!} + x^3$$



The image shows a screenshot of the Turbo C++ IDE. The main window displays a C++ program that calculates the sum of the series $1 + \frac{x}{1!} + \frac{x^2}{2!} + x^3$. The program prompts the user to enter the power of x (d) and the number x (x). The output shows the result 6.33333 for the input power 3 and number 2.

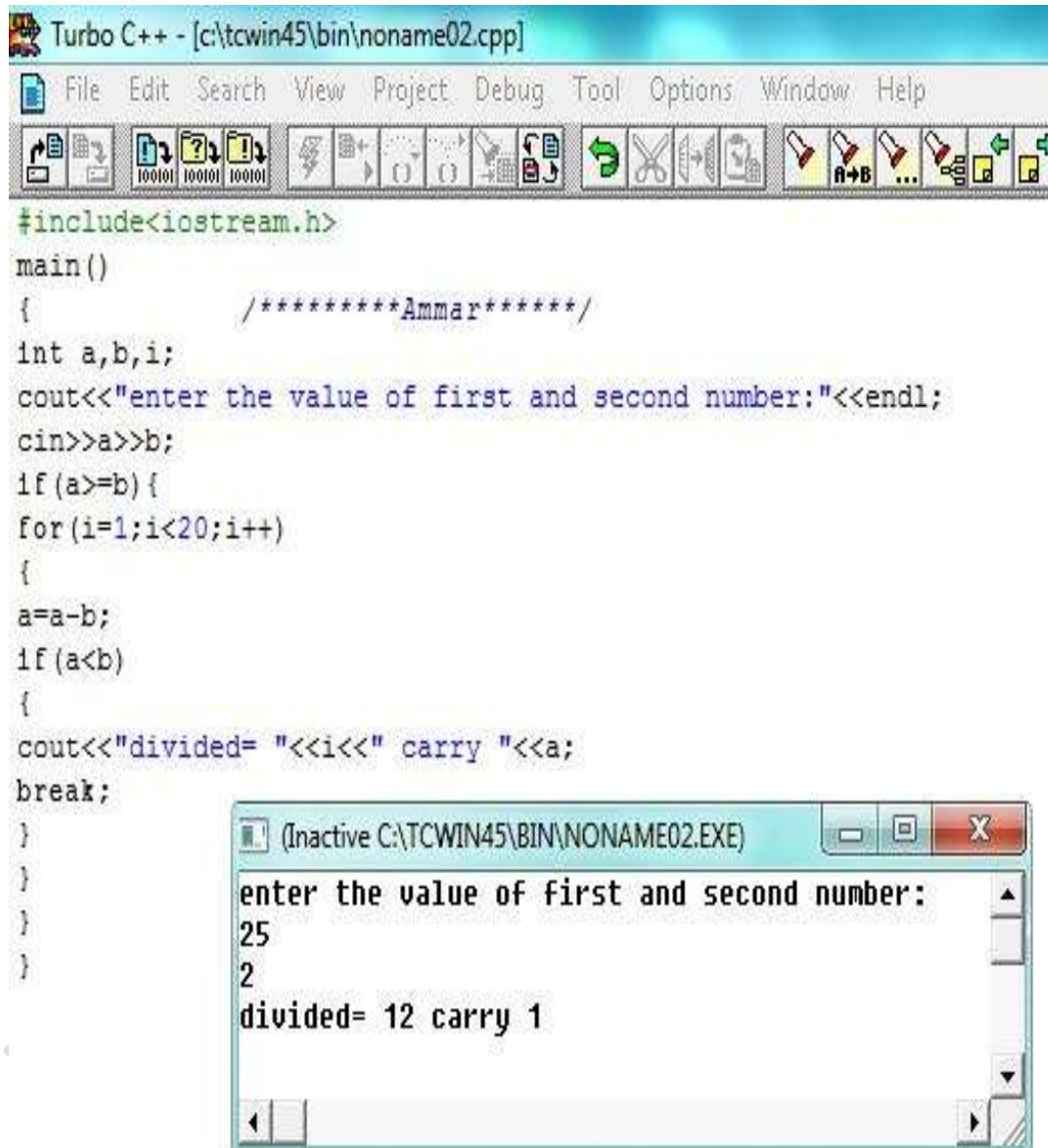
```
#include <iostream.h>
main()
{
int i;
float y,x,s,f,m,n,d;
f=y=1;
m=-1;

n=0;
cout<<"enter the power of"<<endl;
cin>>d;
cout<<"enter the number"<<endl;
cin>>x;
for(i=1;i<=d;i++){
f=f*i;
m=m*x;
n=-m; // inverse signal inevery loop
s=n/f;
y=y+s;}
cout<<y;
}
```

(Inactive ...)

```
enter the power of
3
enter the number
2
6.33333
```

Q10/Write C++ program to find divided and carry of two number with out using (/) and mod?



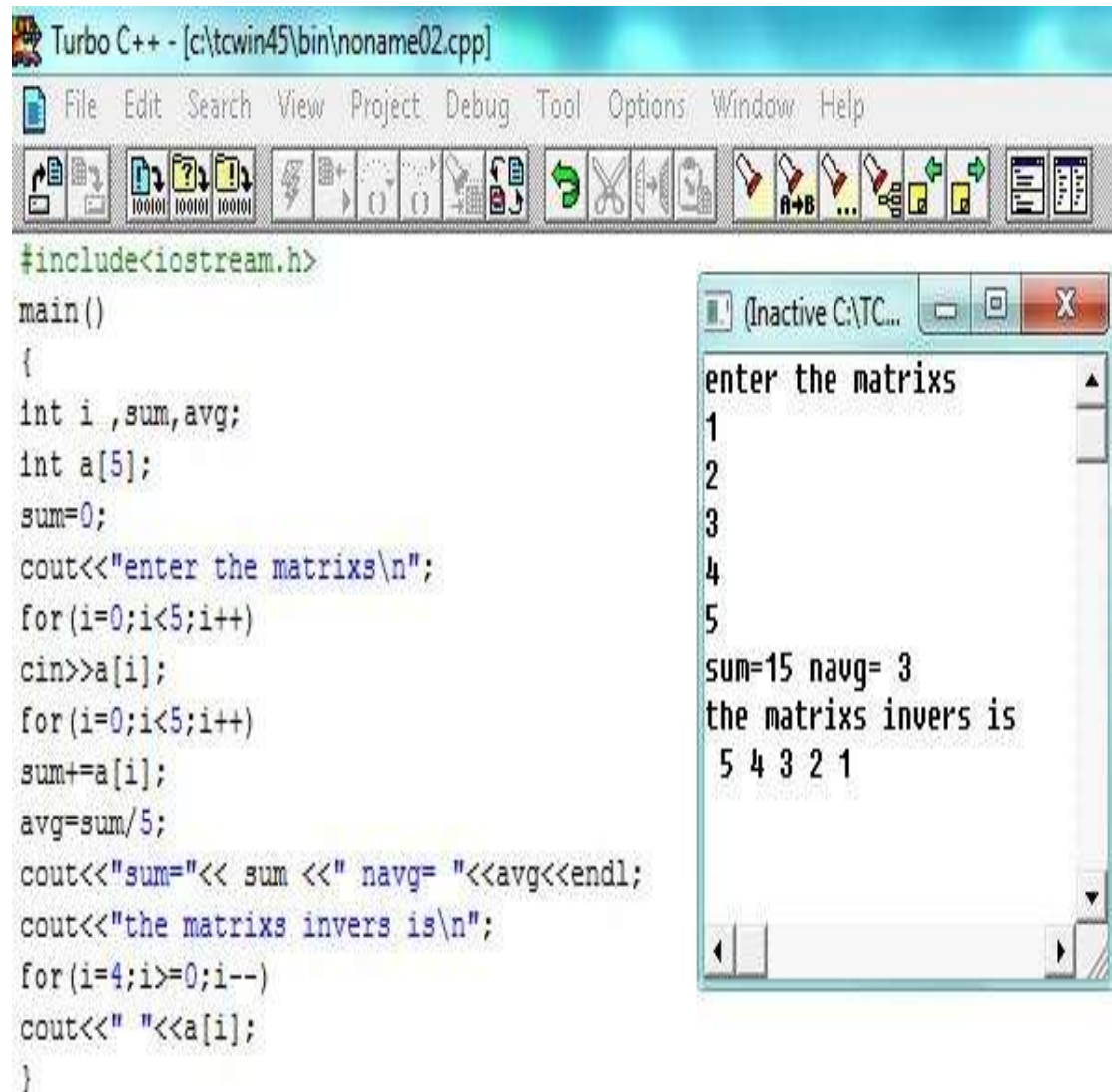
The image shows a Turbo C++ IDE window titled "Turbo C++ - [c:\tcwin45\bin\noname02.cpp]". The menu bar includes File, Edit, Search, View, Project, Debug, Tool, Options, Window, and Help. The toolbar contains various icons for file operations, editing, and execution. The code in the editor is as follows:

```
#include<iostream.h>
main()
{
    /*****Ammar*****/
    int a,b,i;
    cout<<"enter the value of first and second number:"<<endl;
    cin>>a>>b;
    if(a>=b){
        for(i=1;i<20;i++)
        {
            a=a-b;
            if(a<b)
            {
                cout<<"divided= "<<i<<" carry "<<a;
                break;
            }
        }
    }
}
```

An execution window titled "(Inactive C:\TCWIN45\BIN\NONAME02.EXE)" is overlaid on the code. It displays the program's output:

```
enter the value of first and second number:
25
2
divided= 12 carry 1
```

Q11/Enter any 1_D array consist of 5 number
find sum and average and display in reverse?



The image shows a screenshot of the Turbo C++ IDE. The main window displays the following C++ code:

```
#include<iostream.h>
main()
{
int i ,sum,avg;
int a[5];
sum=0;
cout<<"enter the matrixs\n";
for(i=0;i<5;i++)
cin>>a[i];
for(i=0;i<5;i++)
sum+=a[i];
avg=sum/5;
cout<<"sum="<< sum <<" navg= " <<avg<<endl;
cout<<"the matrixs invers is\n";
for(i=4;i>=0;i--)
cout<<" "<<a[i];
}
```

To the right, a separate window titled "(Inactive C:\TC..." shows the program's output:

```
enter the matrixs
1
2
3
4
5
sum=15 navg= 3
the matrixs invers is
5 4 3 2 1
```

Q12/by use c language enter any 2_D matrix
then sort ascending order?

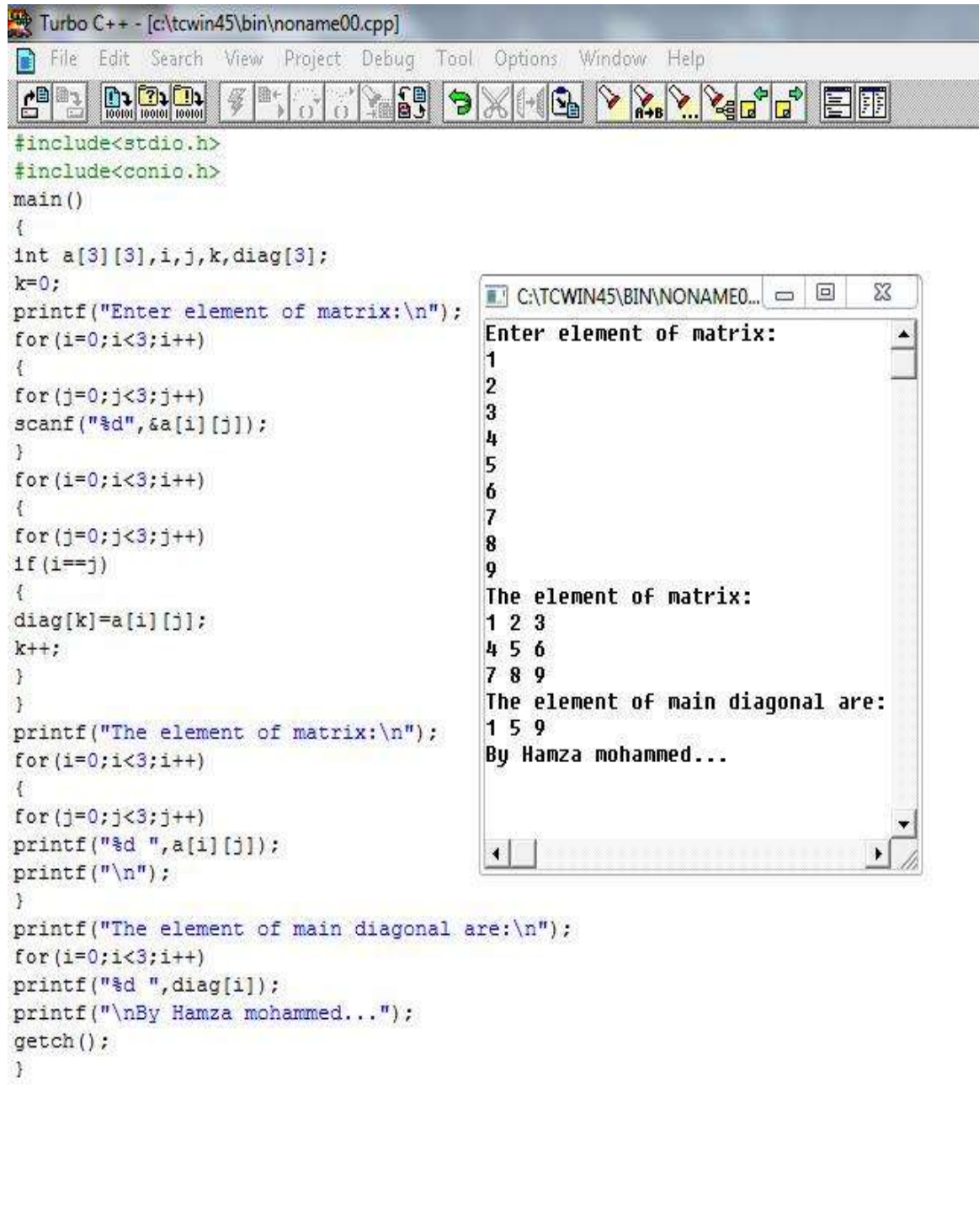
The image shows a Turbo C++ IDE window titled "Turbo C++ - [c:\tcwin45\bin\noname00.cpp]". The menu bar includes File, Edit, Search, View, Project, Debug, Tool, Options, Window, and Help. The toolbar contains various icons for file operations, editing, and execution. The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
main()
{
int A[3][3],r,j,i,temp;printf("Enter element of matrix:\n");
for(i=0;i<3;i++)
{
for(j=0;j<3;j++)
scanf("%d",&A[i][j]) ;           /*prepared by:Hamza mohammed*/
}
for(r = 0; r < 3; r++)
{
for(i = 0; i < 3 - 1; i++)
{
for(j = i + 1; j < 3; j++)
{
if(A[r][i] > A[r][j])
{
temp = A[r][i];
A[r][i] = A[r][j];
A[r][j] = temp;
}
}
}
}
for(i=0;i<3;i++)
{
for(j=0;j<3;j++)
printf("%d",A[i][j]);
printf("\n");
}
getch();
}
```

An output window titled "C:\TCWIN45\BIN\N..." is open, displaying the following text:

```
Enter element of matrix:
9
8
7
6
5
4
3
2
1
789
456
123
```

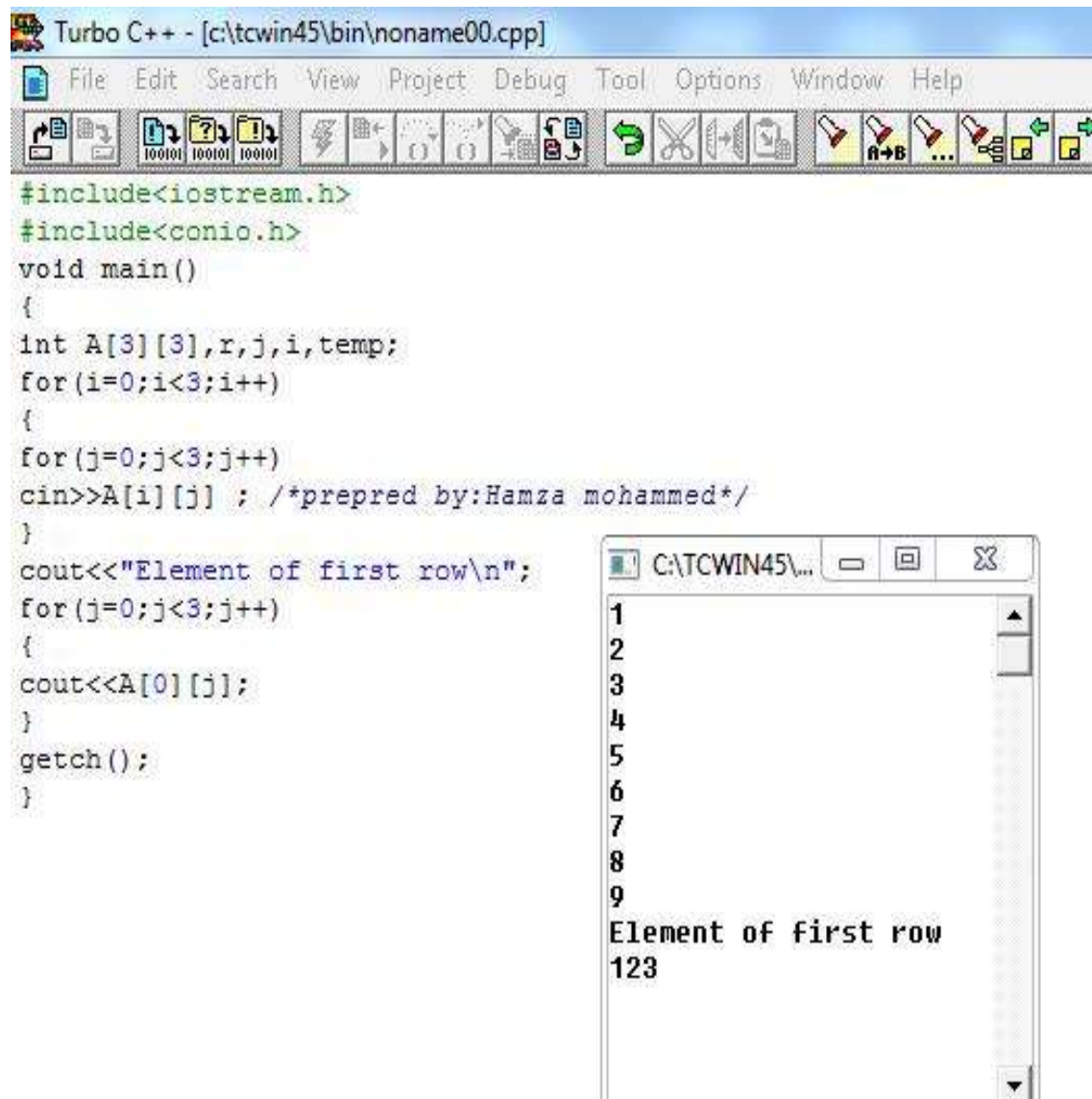
Q13/by use C language enter any 2_D matrix then place the element of main diagonal in 1_D array and display it?



```
Turbo C++ - [c:\tcwin45\bin\noname00.cpp]
File Edit Search View Project Debug Tool Options Window Help
100101 100101 100101
#include<stdio.h>
#include<conio.h>
main()
{
int a[3][3],i,j,k,diag[3];
k=0;
printf("Enter element of matrix:\n");
for(i=0;i<3;i++)
{
for(j=0;j<3;j++)
scanf("%d",&a[i][j]);
}
for(i=0;i<3;i++)
{
for(j=0;j<3;j++)
if(i==j)
{
diag[k]=a[i][j];
k++;
}
}
printf("The element of matrix:\n");
for(i=0;i<3;i++)
{
for(j=0;j<3;j++)
printf("%d ",a[i][j]);
printf("\n");
}
printf("The element of main diagonal are:\n");
for(i=0;i<3;i++)
printf("%d ",diag[i]);
printf("\nBy Hamza mohammed...");
getch();
}
```

C:\TCWIN45\BIN\NONAME0... Enter element of matrix:
1
2
3
4
5
6
7
8
9
The element of matrix:
1 2 3
4 5 6
7 8 9
The element of main diagonal are:
1 5 9
By Hamza mohammed...

Q14/write C++ program to enter any 2_D matrix then display the first row?



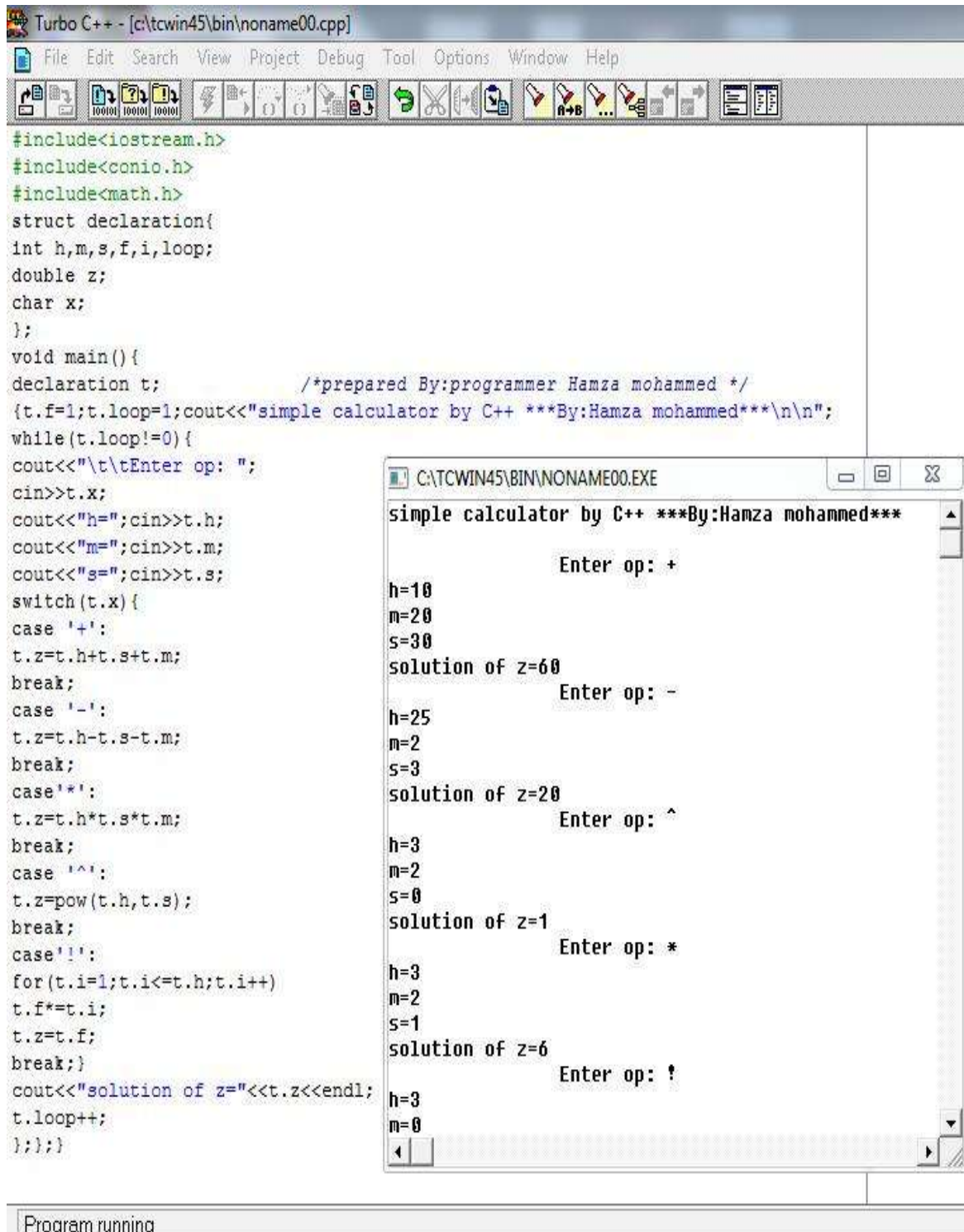
The image shows a screenshot of the Turbo C++ IDE. The main window displays the following C++ code:

```
#include<iostream.h>
#include<conio.h>
void main()
{
int A[3][3],r,j,i,temp;
for(i=0;i<3;i++)
{
for(j=0;j<3;j++)
cin>>A[i][j] ; /*prepred by:Hamza mohammed*/
}
cout<<"Element of first row\n";
for(j=0;j<3;j++)
{
cout<<A[0][j];
}
getch();
}
```

The output window shows the following text:

```
1
2
3
4
5
6
7
8
9
Element of first row
123
```


Q15/write c++ program to design simple calculator the program is repeated after each entry ..use structure



The image shows a Turbo C++ IDE window with a C++ program for a simple calculator. The program uses a structure to store variables and a while loop to repeat the calculation process. The output window shows the program's execution, including prompts for variables and operators, and the resulting calculations.

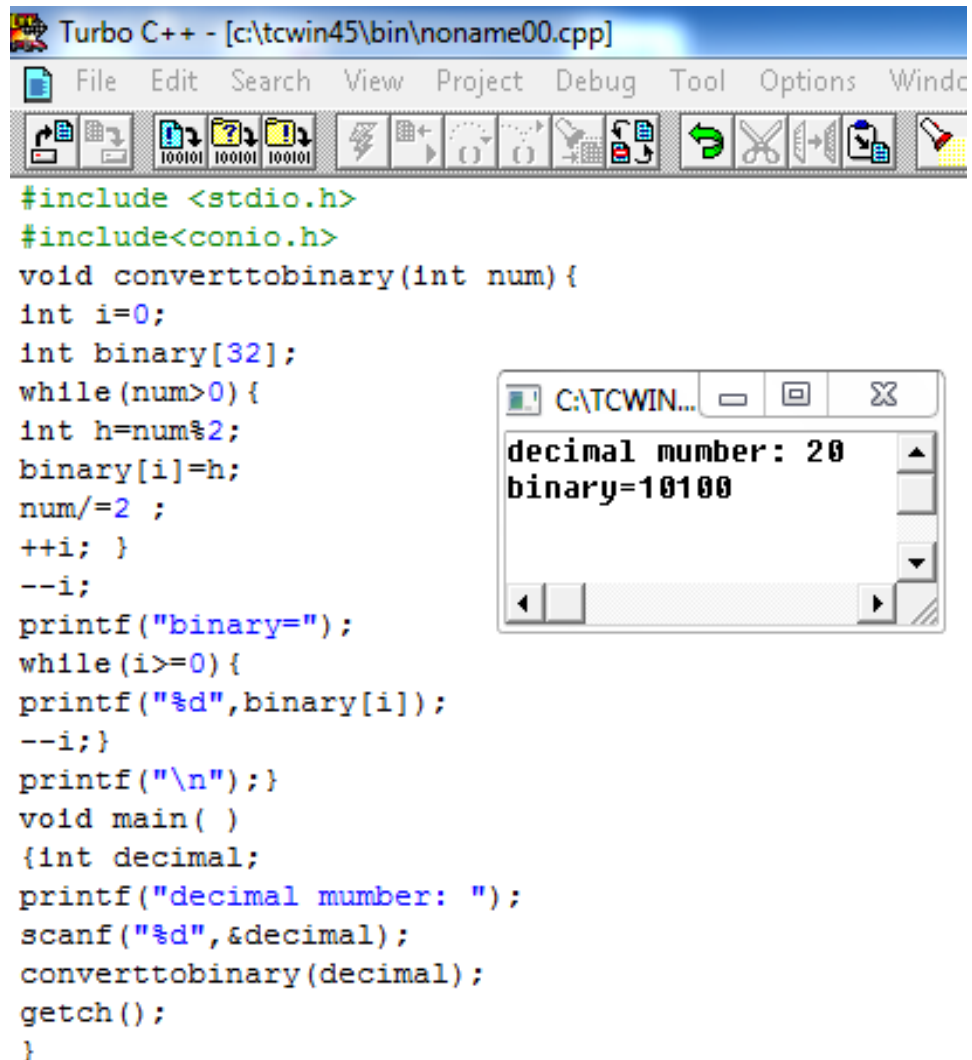
```
#include<iostream.h>
#include<conio.h>
#include<math.h>
struct declaration{
int h,m,s,f,i,loop;
double z;
char x;
};
void main(){
declaration t;
/*prepared By:programmer Hamza mohammed */
{t.f=1;t.loop=1;cout<<"simple calculator by C++ ***By:Hamza mohammed***\n\n";
while(t.loop!=0){
cout<<"\t\tEnter op: ";
cin>>t.x;
cout<<"h=";cin>>t.h;
cout<<"m=";cin>>t.m;
cout<<"s=";cin>>t.s;
switch(t.x){
case '+':
t.z=t.h+t.s+t.m;
break;
case '-':
t.z=t.h-t.s-t.m;
break;
case '*':
t.z=t.h*t.s*t.m;
break;
case '^':
t.z=pow(t.h,t.s);
break;
case '!':
for(t.i=1;t.i<=t.h;t.i++)
t.f*=t.i;
t.z=t.f;
break;}
cout<<"solution of z="<<t.z<<endl;
t.loop++;
};}
```

Output window (C:\TCWIN45\BIN\NONAME00.EXE):

```
simple calculator by C++ ***By:Hamza mohammed***
Enter op: +
h=10
m=20
s=30
solution of z=60
Enter op: -
h=25
m=2
s=3
solution of z=20
Enter op: ^
h=3
m=2
s=0
solution of z=1
Enter op: *
h=3
m=2
s=1
solution of z=6
Enter op: !
h=3
m=0
```

Program running

Q16/Write C program to convert from decimal to binary?



The image shows a Turbo C++ IDE window with the following code and output:

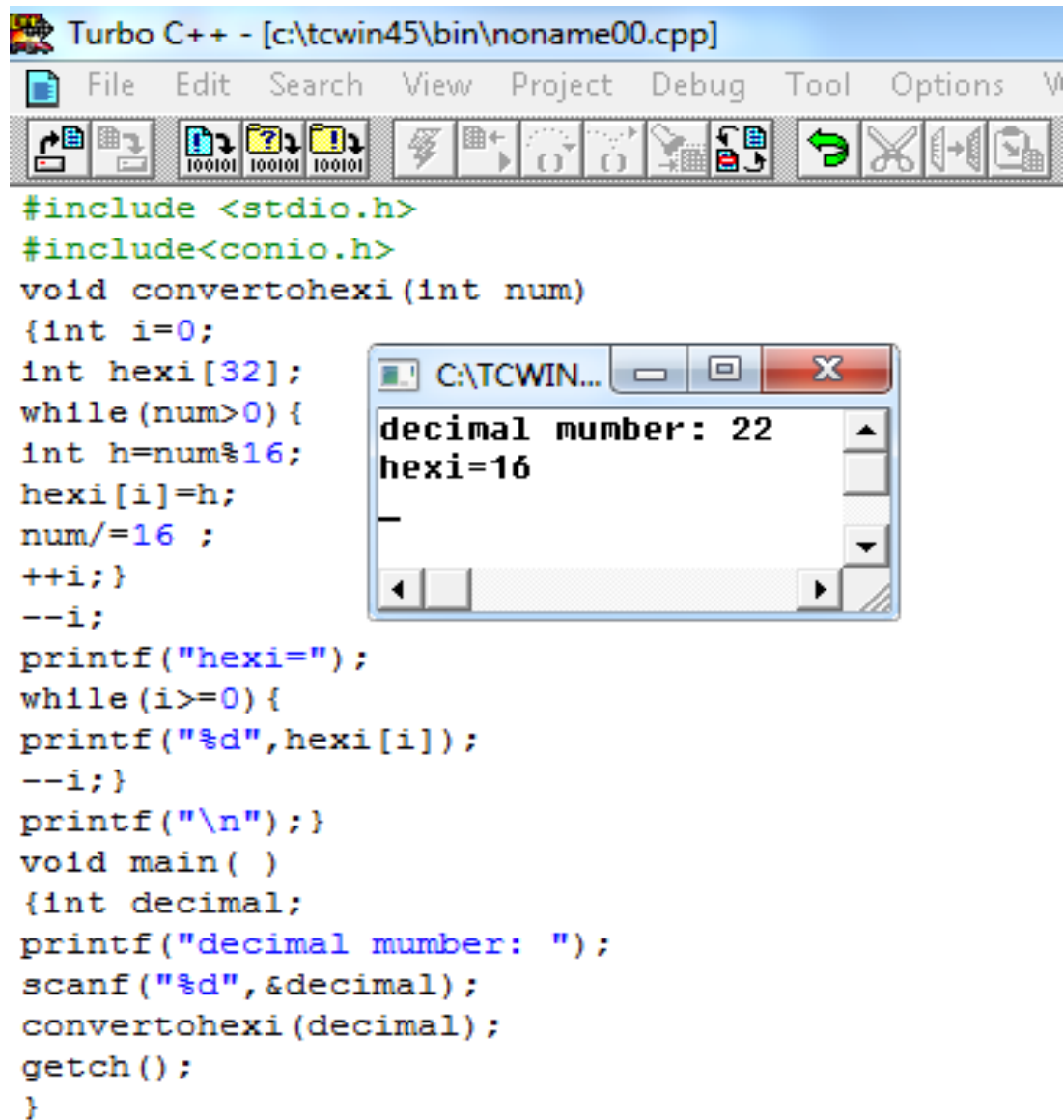
```
#include <stdio.h>
#include<conio.h>
void converttobinary(int num){
int i=0;
int binary[32];
while (num>0) {
int h=num%2;
binary[i]=h;
num/=2 ;
++i; }
--i;
printf("binary=");
while (i>=0) {
printf("%d",binary[i]);
--i;}
printf("\n");}
void main( )
{int decimal;
printf("decimal number: ");
scanf("%d",&decimal);
converttobinary(decimal);
getch();
}
```

The output window shows:

```
decimal number: 20
binary=10100
```

Há

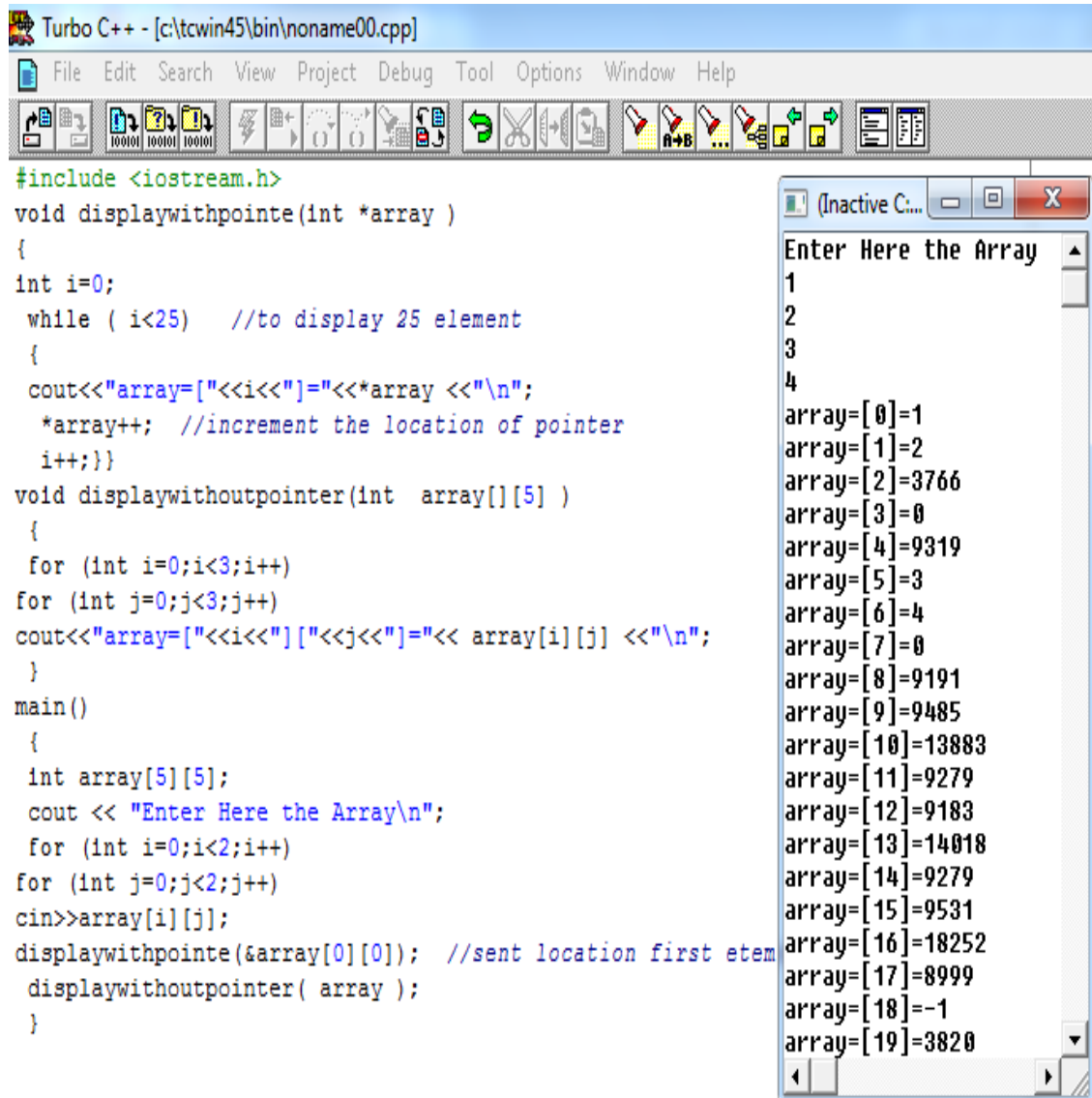
Q17/write C program to convert from decimal to hexa?



```
#include <stdio.h>
#include<conio.h>
void converttohexi(int num)
{int i=0;
int hexi[32];
while (num>0) {
int h=num%16;
hexi[i]=h;
num/=16 ;
++i;}
--i;
printf("hexi=");
while (i>=0) {
printf("%d",hexi[i]);
--i;}
printf("\n");}
void main( )
{int decimal;
printf("decimal number: ");
scanf("%d",&decimal);
converttohexi (decimal);
getch();
}
```

decimal number: 22
hexi=16

Q18/Write C++ program to print 2_D array with pointer and with out pointer?



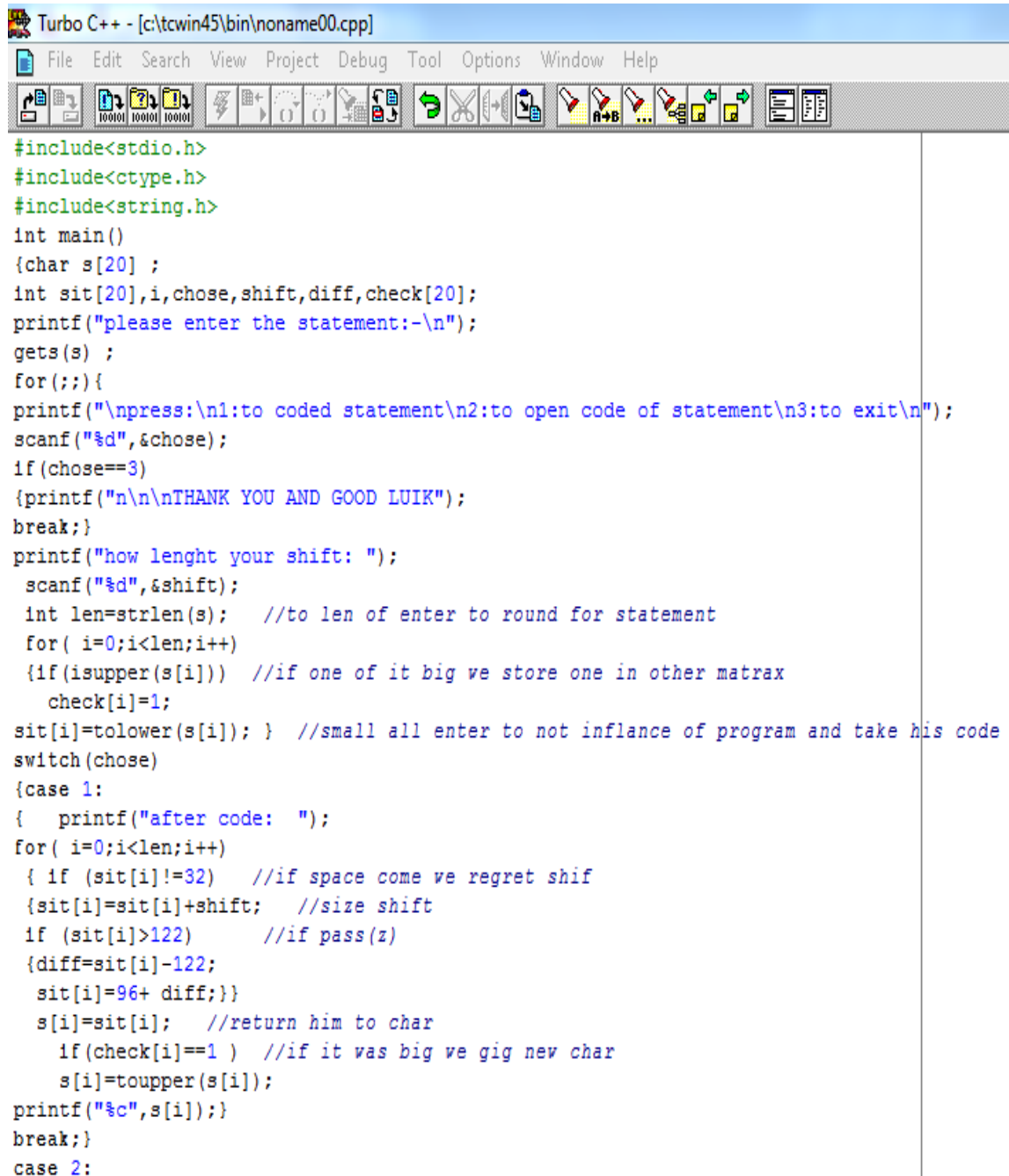
The image shows a Turbo C++ IDE window with a C++ program and its output. The program defines two functions: `displaywithpointe` (note the typo) and `displaywithoutpointer`. The `main` function uses `cin` to input a 5x5 array and then calls both display functions. The output window shows the array elements being printed with their memory addresses.

```
#include <iostream.h>
void displaywithpointe(int *array )
{
int i=0;
while ( i<25) //to display 25 element
{
cout<<"array=["<<i<<"]="<<*array <<"\n";
*array++; //increment the location of pointer
i++;}}
void displaywithoutpointer(int array[][5] )
{
for (int i=0;i<3;i++)
for (int j=0;j<3;j++)
cout<<"array=["<<i<<"["<<j<<"]="<< array[i][j] <<"\n";
}
main()
{
int array[5][5];
cout << "Enter Here the Array\n";
for (int i=0;i<2;i++)
for (int j=0;j<2;j++)
cin>>array[i][j];
displaywithpointe(&array[0][0]); //sent location first etem
displaywithoutpointer( array );
}
```

Output:

```
Enter Here the Array
1
2
3
4
array=[ 0]=1
array=[ 1]=2
array=[ 2]=3766
array=[ 3]=0
array=[ 4]=9319
array=[ 5]=3
array=[ 6]=4
array=[ 7]=0
array=[ 8]=9191
array=[ 9]=9485
array=[ 10]=13883
array=[ 11]=9279
array=[ 12]=9183
array=[ 13]=14018
array=[ 14]=9279
array=[ 15]=9531
array=[ 16]=18252
array=[ 17]=8999
array=[ 18]=-1
array=[ 19]=3820
```

Q19/write C program to accepted any text then coded this text and open coded of text?



```
Turbo C++ - [c:\tcwin45\bin\noname00.cpp]
File Edit Search View Project Debug Tool Options Window Help
#include<stdio.h>
#include<ctype.h>
#include<string.h>
int main()
{char s[20] ;
int sit[20],i,chose,shift,diff,check[20];
printf("please enter the statement:-\n");
gets(s) ;
for(;;){
printf("\npress:\n1:to coded statement\n2:to open code of statement\n3:to exit\n");
scanf("%d",&chose);
if(chose==3)
{printf("\n\nTHANK YOU AND GOOD LUIK");
break;}
printf("how lenght your shift: ");
scanf("%d",&shift);
int len=strlen(s); //to len of enter to round for statement
for( i=0;i<len;i++)
{if(isupper(s[i])) //if one of it big ve store one in other matrax
check[i]=1;
sit[i]=tolower(s[i]); } //small all enter to not inflance of program and take his code
switch(chose)
{case 1:
{ printf("after code: ");
for( i=0;i<len;i++)
{ if (sit[i]!=32) //if space come ve regret shif
{sit[i]=sit[i]+shift; //size shift
if (sit[i]>122) //if pass(z)
{diff=sit[i]-122;
sit[i]=96+ diff;}}
s[i]=sit[i]; //return him to char
if(check[i]==1) //if it was big ve gig new char
s[i]=toupper(s[i]);
printf("%c",s[i]);}
break;}
case 2:
```

```
case 2:
{ printf("after open code:  ");
for( i=0;i<len;i++)
{if (sit[i]!=32){
sit[i]=sit[i]-shift;
if (sit[i]<97) //if pass(A)
{diff=97-sit[i];
sit[i]=123-diff;}}
s[i]=sit[i];
if(check[i]==1 ) //if it was big we gig new char
s[i]=toupper(s[i]);
printf("%c",s[i]); }
break;}
default:
{ printf("please correct your chosse\n") ;
break;}
}
}
}
```

Hamza

**Q20/Write C program to perform the following
dependent on your select entry:**

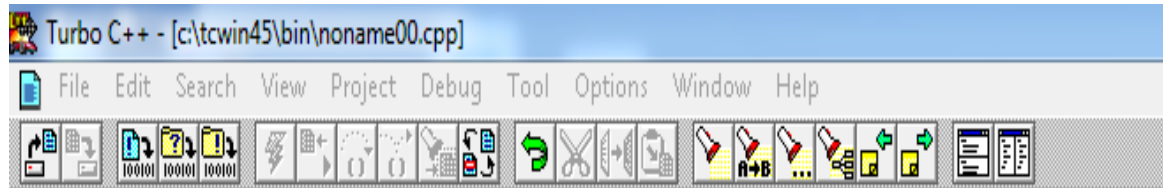
******Hint the program is repeat**

**1_enter any number then multiplied by 4 with out
use(*, +)**

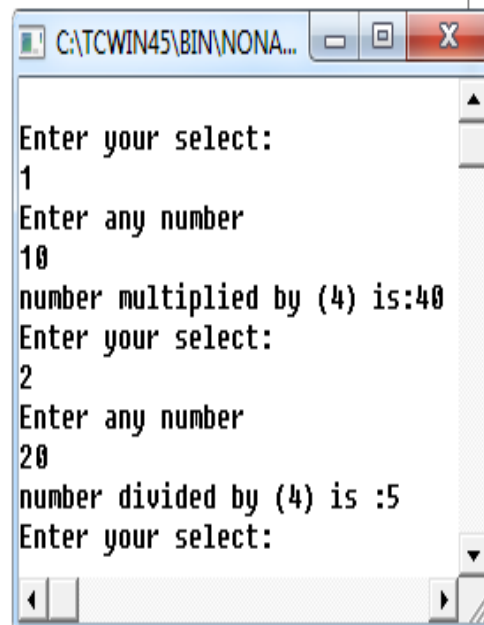
**2_ enter any number then divided by 4 with out use
(/,-)**

3_Exit

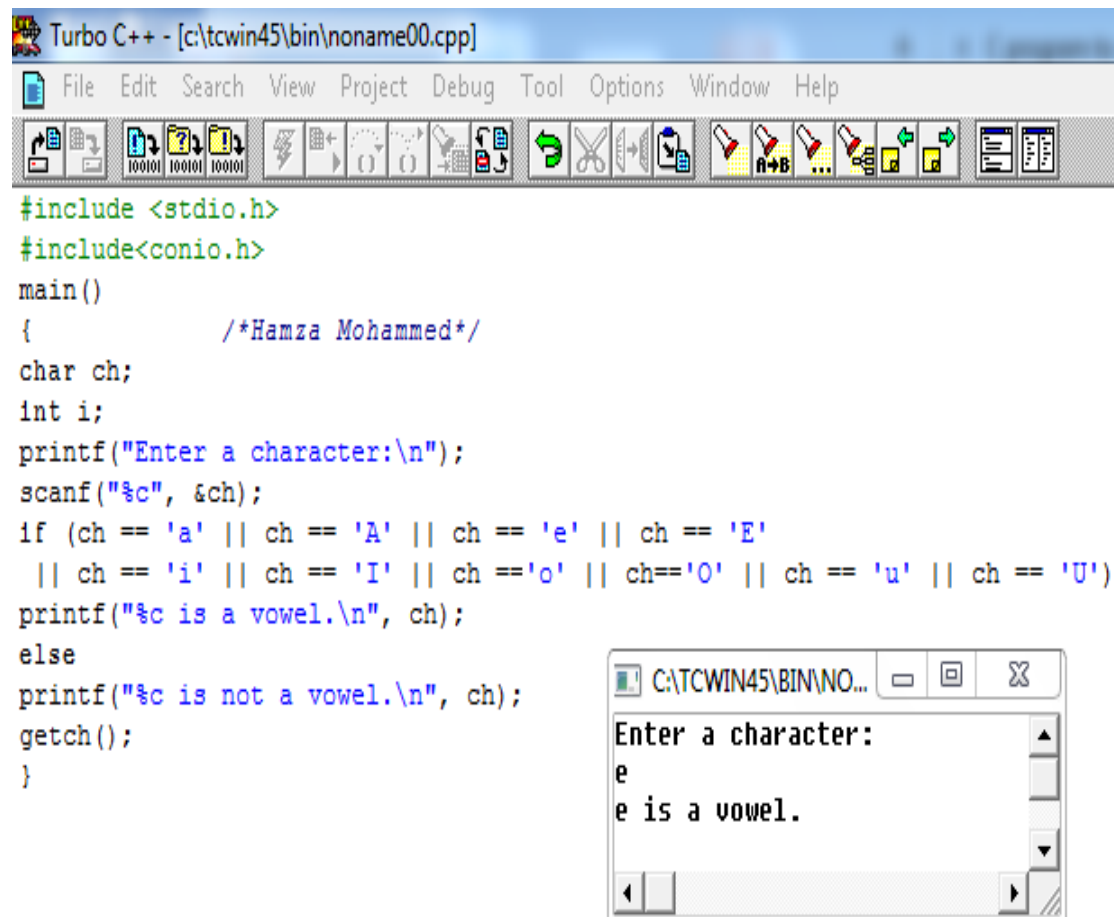
Hamza mohammed



```
#include<stdio.h>
#include<conio.h>
main()
{
    /******
int select,x,i=1;    /*prepared by hamza mohammed*/
while(i!=0)
{
printf("\nEnter your select:\n");
scanf("%d",&select);
printf("Enter any number\n");
scanf("%d",&x);
switch(select)
{
case 1:
printf("number multiplied by (4) is:%d",x<<2);
break;
case 2:
printf("number divided by (4) is :%d",x>>2);
break;
case 3:
case 4:
break;
}
i++;
}
printf("\n");
getch();
}
```



Q21/Enter any letter(small or capital)then
check if it vowel or not?



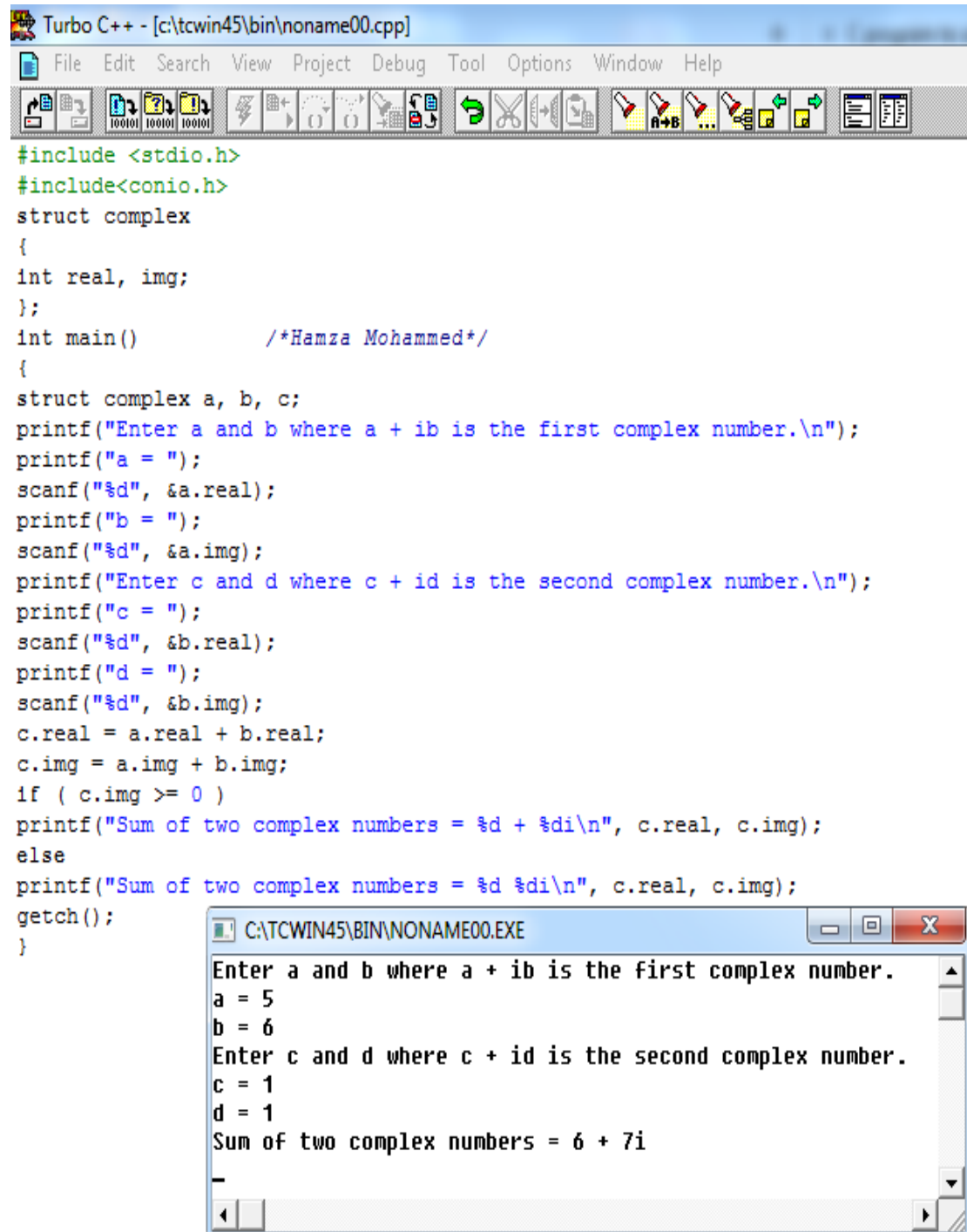
The image shows a screenshot of the Turbo C++ IDE. The main window displays the following C++ code:

```
#include <stdio.h>
#include <conio.h>
main()
{
    /*Hamza Mohammed*/
    char ch;
    int i;
    printf("Enter a character:\n");
    scanf("%c", &ch);
    if (ch == 'a' || ch == 'A' || ch == 'e' || ch == 'E'
        || ch == 'i' || ch == 'I' || ch == 'o' || ch == 'O' || ch == 'u' || ch == 'U')
    printf("%c is a vowel.\n", ch);
    else
    printf("%c is not a vowel.\n", ch);
    getch();
}
```

To the right of the code editor, a small console window is open, showing the program's execution. The prompt "Enter a character:" is followed by the input "e", and the output is "e is a vowel.".

Q22/write C program to enter two complex number(a+bi) then find summation of them

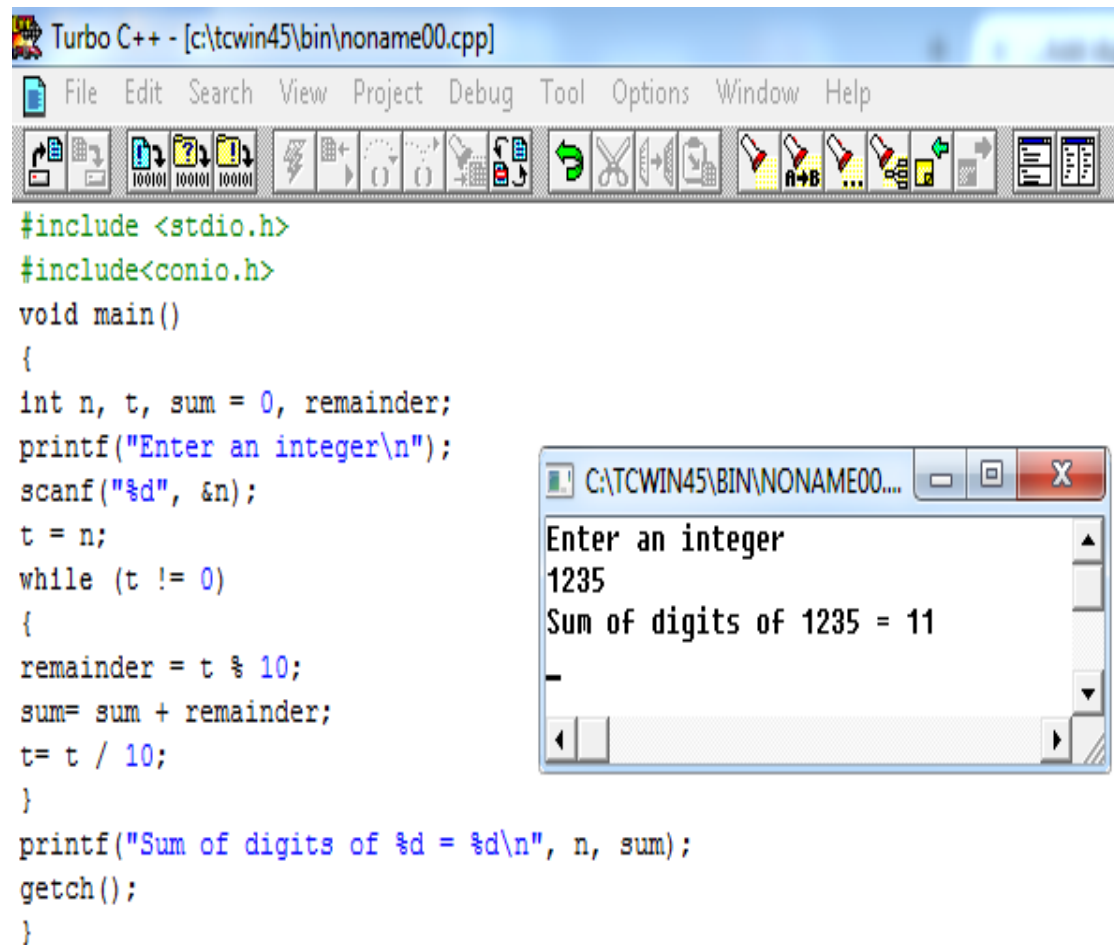
Hint:use structure to declaration



```
Turbo C++ - [c:\tcwin45\bin\noname00.cpp]
File Edit Search View Project Debug Tool Options Window Help
100101 100101 100101
#include <stdio.h>
#include<conio.h>
struct complex
{
int real, img;
};
int main()          /*Hamza Mohammed*/
{
struct complex a, b, c;
printf("Enter a and b where a + ib is the first complex number.\n");
printf("a = ");
scanf("%d", &a.real);
printf("b = ");
scanf("%d", &a.img);
printf("Enter c and d where c + id is the second complex number.\n");
printf("c = ");
scanf("%d", &b.real);
printf("d = ");
scanf("%d", &b.img);
c.real = a.real + b.real;
c.img = a.img + b.img;
if ( c.img >= 0 )
printf("Sum of two complex numbers = %d + %di\n", c.real, c.img);
else
printf("Sum of two complex numbers = %d %di\n", c.real, c.img);
getch();
}

C:\TCWIN45\BIN\NONAME00.EXE
Enter a and b where a + ib is the first complex number.
a = 5
b = 6
Enter c and d where c + id is the second complex number.
c = 1
d = 1
Sum of two complex numbers = 6 + 7i
-
```

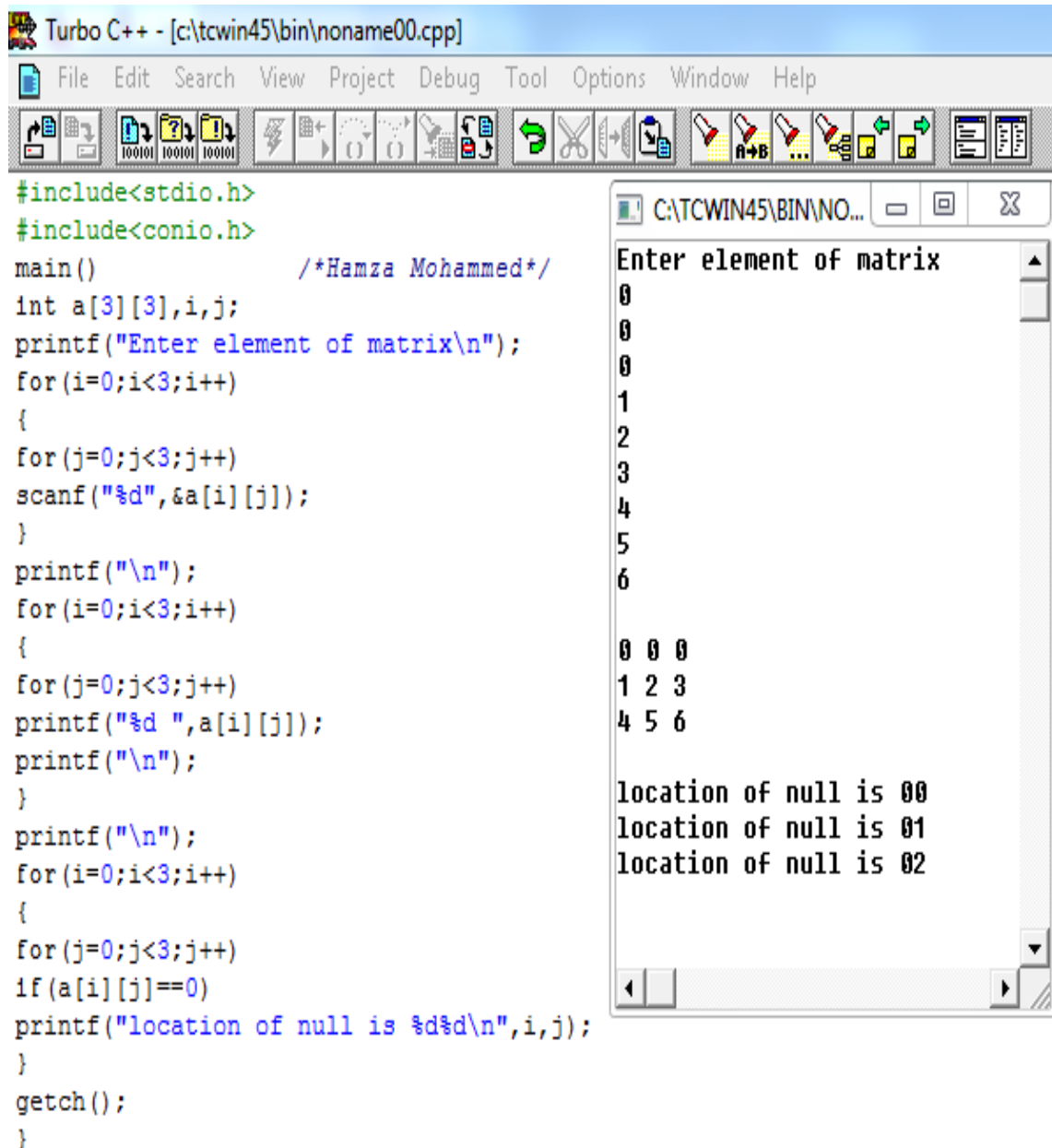
Q23/write C program to enter any integer number consist of many digit then find sum digit?



```
#include <stdio.h>
#include <conio.h>
void main()
{
int n, t, sum = 0, remainder;
printf("Enter an integer\n");
scanf("%d", &n);
t = n;
while (t != 0)
{
remainder = t % 10;
sum= sum + remainder;
t= t / 10;
}
printf("Sum of digits of %d = %d\n", n, sum);
getch();
}
```

C:\TCWIN45\BIN\NONAME00...
Enter an integer
1235
Sum of digits of 1235 = 11
-

Q24/Write C program to enter ant 2_D matrix then find location of null element?



The image shows a Turbo C++ IDE window with a C program and its output. The program is designed to input a 3x3 matrix and find the location of a null element (0).

```
#include<stdio.h>
#include<conio.h>
main()          /*Hamza Mohammed*/
int a[3][3],i,j;
printf("Enter element of matrix\n");
for(i=0;i<3;i++)
{
for(j=0;j<3;j++)
scanf("%d",&a[i][j]);
}
printf("\n");
for(i=0;i<3;i++)
{
for(j=0;j<3;j++)
printf("%d ",a[i][j]);
printf("\n");
}
printf("\n");
for(i=0;i<3;i++)
{
for(j=0;j<3;j++)
if(a[i][j]==0)
printf("location of null is %d%d\n",i,j);
}
getch();
}
```

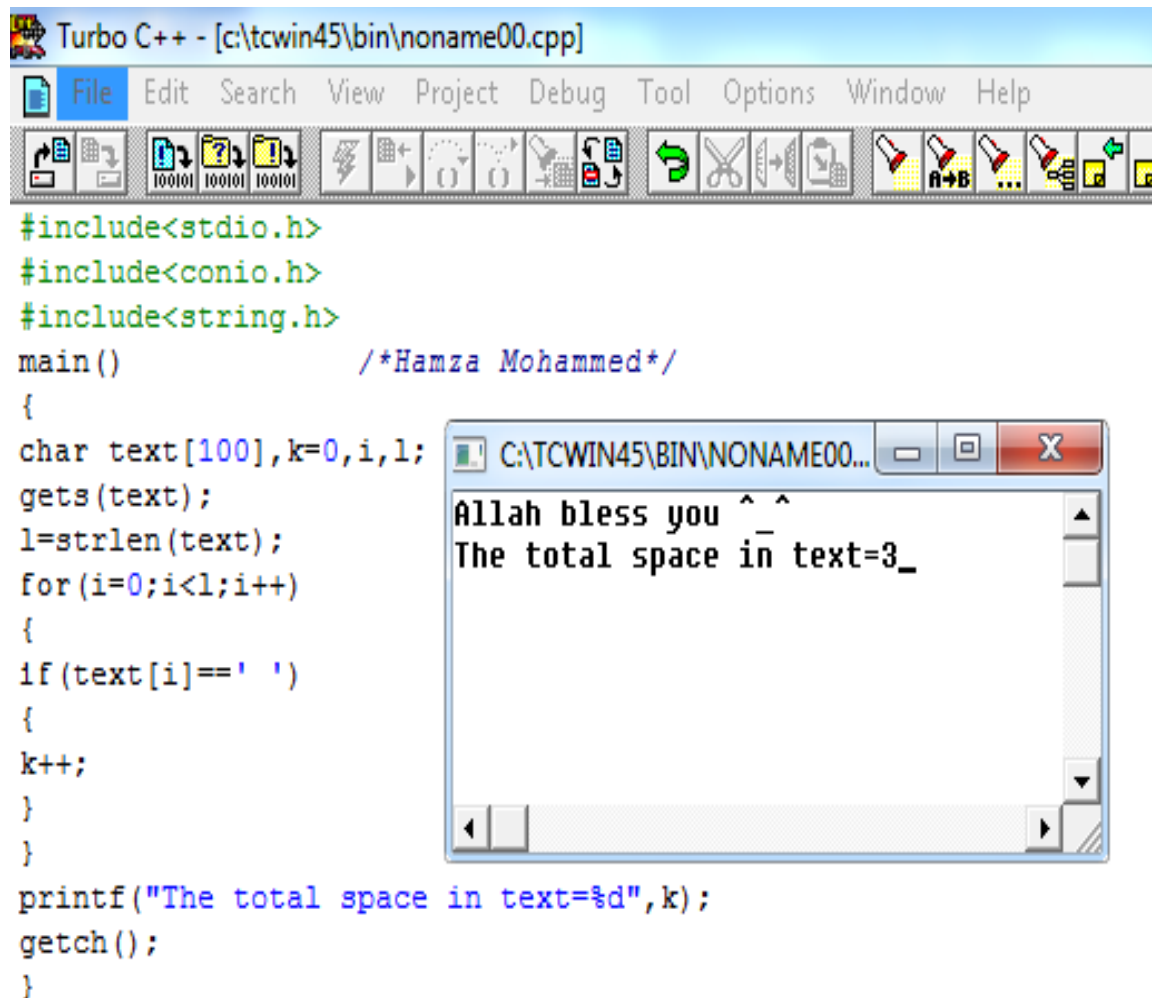
The output window shows the following text:

```
Enter element of matrix
0
0
0
1
2
3
4
5
6

0 0 0
1 2 3
4 5 6

location of null is 00
location of null is 01
location of null is 02
```

Q26/write C program to Enter any text then find the total space in text?



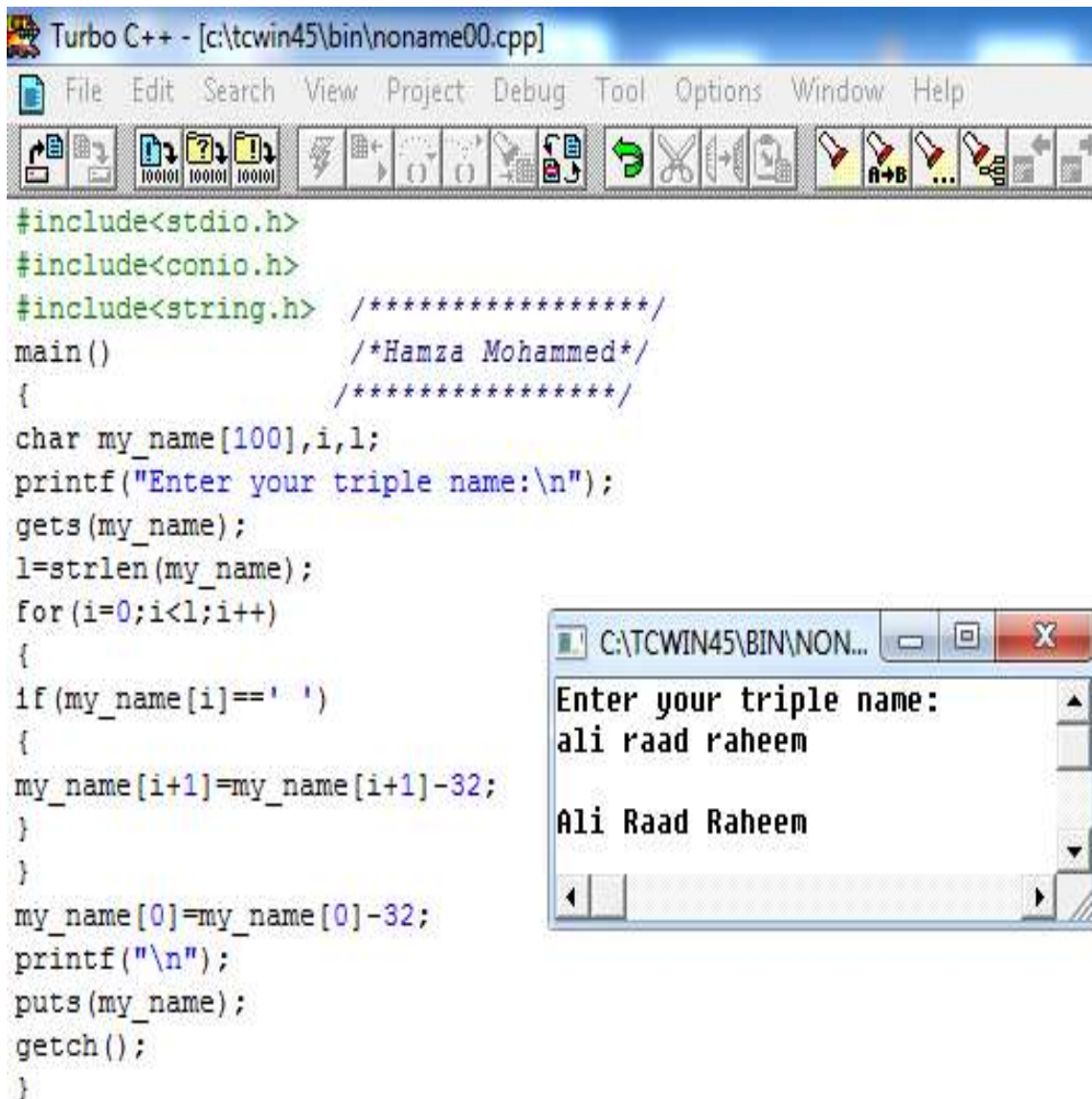
The image shows a screenshot of the Turbo C++ IDE. The main window displays the following C code:

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
main()          /*Hamza Mohammed*/
{
char text[100],k=0,i,l;
gets(text);
l=strlen(text);
for(i=0;i<l;i++)
{
if(text[i]==' ')
{
k++;
}
}
printf("The total space in text=%d",k);
getch();
}
```

An output window titled "C:\TCWIN45\BIN\NONAME00..." is overlaid on the code, showing the input and output:

```
Allah bless you ^_^
The total space in text=3_
```

Q27/Write C program accept your triple name then convert the first letter of each name from small letter into capital?



The image shows a Turbo C++ IDE window titled "Turbo C++ - [c:\tcwin45\bin\noname00.cpp]". The menu bar includes File, Edit, Search, View, Project, Debug, Tool, Options, Window, and Help. The toolbar contains various icons for file operations, editing, and execution. The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
#include<string.h> /*******/
main() /*Hamza Mohammed*/
{ /*******/
char my_name[100],i,l;
printf("Enter your triple name:\n");
gets(my_name);
l=strlen(my_name);
for(i=0;i<l;i++)
{
if(my_name[i]==' ')
{
my_name[i+1]=my_name[i+1]-32;
}
}
my_name[0]=my_name[0]-32;
printf("\n");
puts(my_name);
getch();
}
```

Below the code, a separate window titled "C:\TCWIN45\BIN\NON..." displays the program's output. It shows the prompt "Enter your triple name:" followed by the input "ali raad raheem" and the resulting output "Ali Raad Raheem".

Q28/write C++ program to enter any text then perform the following:

1_number of letter'a' in text

2_number of space in text

3_convert small letter into capital letter

Use switch case

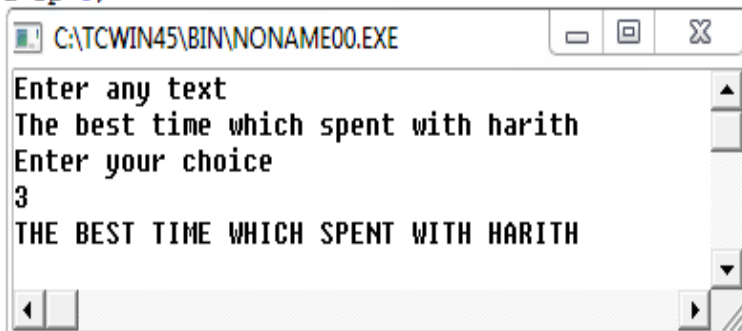
Hamza mohammed

Turbo C++ - [c:\tcwin45\bin\noname00.cpp]

File Edit Search View Project Debug Tool Options Window Help

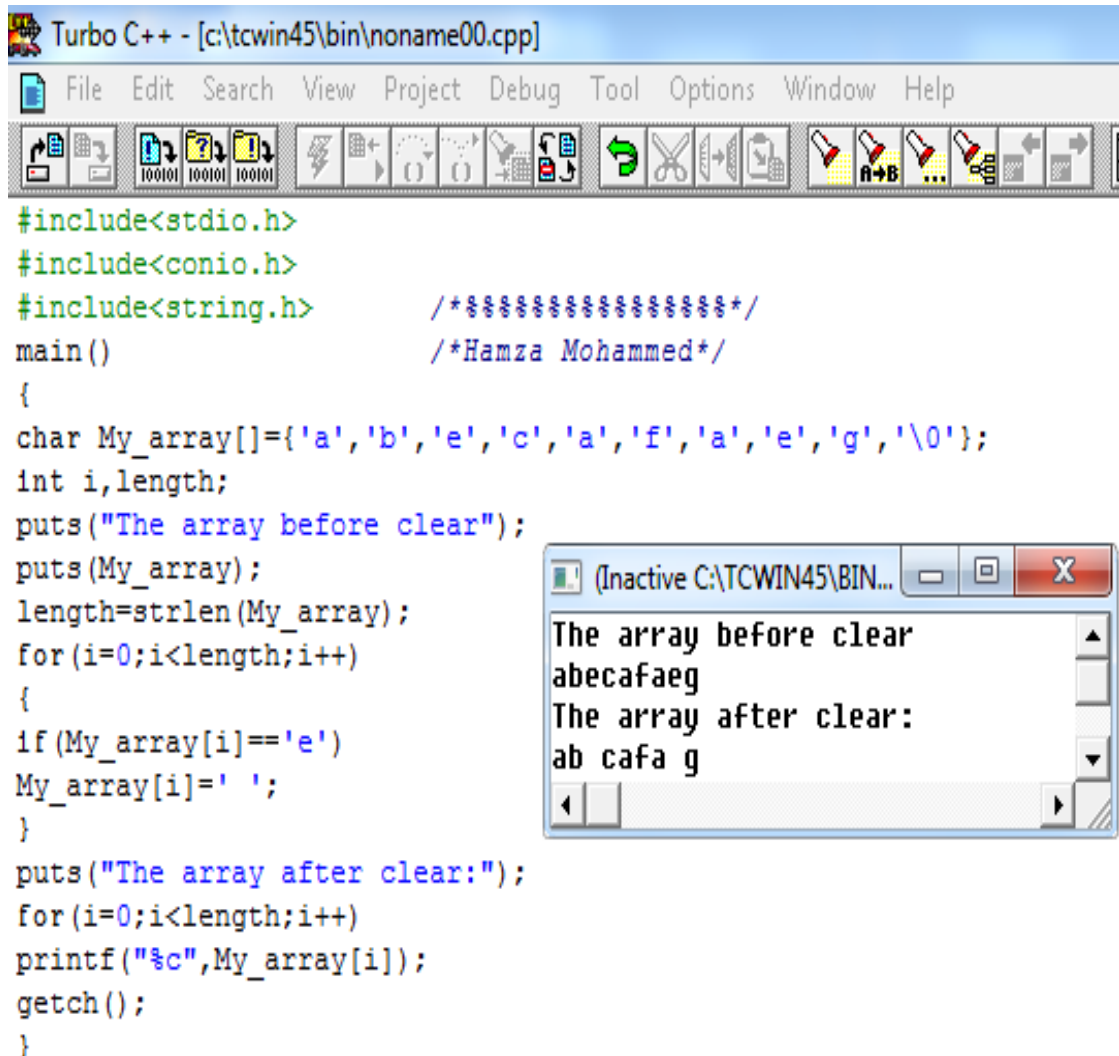


```
#include<stdio.h>
#include<conio.h>
#include<string.h>          /*******/
main()                      /*Hamza Mohammed*/
{
char text22[100];int i,a,sp,x;a=sp=0;
printf("Enter any text\n");
gets(text22);
printf("Enter your choice\n");
scanf("%d",&x);
switch(x){
case 1:
for(i=0;i<strlen(text22);i++){
if(text22[i]=='a')
a++;
}
printf("Total letter a=%d",a);
break;
case 2:
for(i=0;i<strlen(text22);i++){
if(text22[i]==' ')
sp++;
}
printf("The total space=%d",sp);
break;
case 3:
for(i=0;i<strlen(text22);i++){
if(text22[i]>='a'&&text22[i]<='z')
text22[i]=text22[i]-32;
}
puts(text22);
}
getch();
}
```



Q29/Write C++ program to read the array :

My array=[a b e c a f a e g] then clear the letter (e) then display the result as a vector?



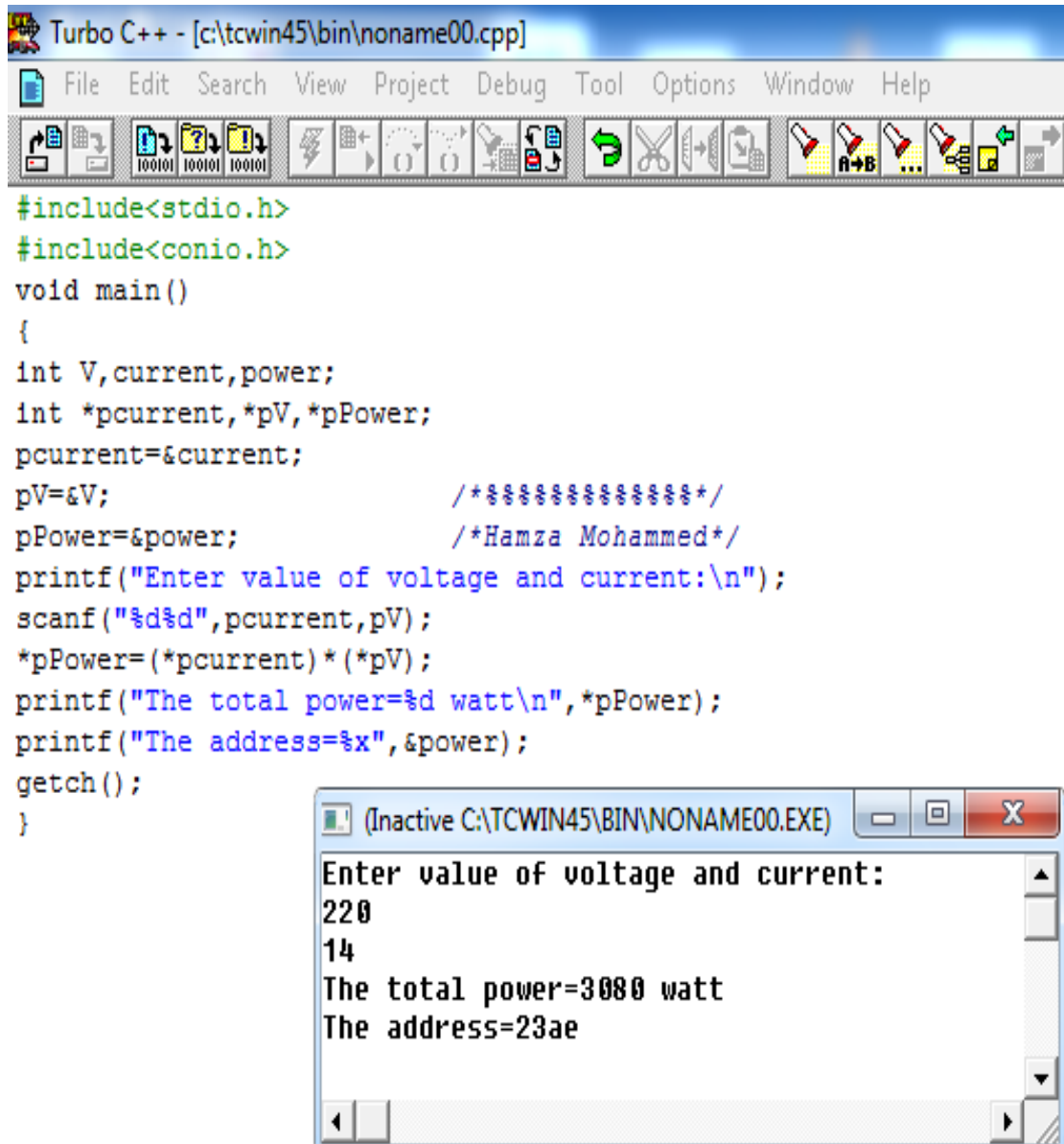
The image shows a Turbo C++ IDE window titled "Turbo C++ - [c:\tcwin45\bin\noname00.cpp]". The menu bar includes File, Edit, Search, View, Project, Debug, Tool, Options, Window, and Help. The toolbar contains various icons for file operations, editing, and debugging. The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
#include<string.h>          /*******/
main()                      /*Hamza Mohammed*/
{
char My_array[]={'a','b','e','c','a','f','a','e','g','\0'};
int i,length;
puts("The array before clear");
puts(My_array);
length=strlen(My_array);
for(i=0;i<length;i++)
{
if(My_array[i]=='e')
My_array[i]=' ';
}
puts("The array after clear:");
for(i=0;i<length;i++)
printf("%c",My_array[i]);
getch();
}
```

An output window titled "(Inactive C:\TCWIN45\BIN..." shows the following text:

```
The array before clear
abecaafaeg
The array after clear:
ab cafa g
```

Q30/Write C program to find the total power consumed at resistive load if the current drawn by load is given by 14A and constant voltage 220V use pointer to solve it?



The image shows a Turbo C++ IDE window titled "Turbo C++ - [c:\tcwin45\bin\noname00.cpp]". The menu bar includes File, Edit, Search, View, Project, Debug, Tool, Options, Window, and Help. The toolbar contains various icons for file operations, editing, and execution. The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int V,current,power;
int *pcurrent,*pV,*pPower;
pcurrent=&current;
pV=&V;                               /*******/
pPower=&power;                         /*Hamza Mohammed*/
printf("Enter value of voltage and current:\n");
scanf("%d%d",pcurrent,pV);
*pPower=(*pcurrent)*(*pV);
printf("The total power=%d watt\n",*pPower);
printf("The address=%x",&power);
getch();
}
```

Below the code, a separate window titled "(Inactive C:\TCWIN45\BIN\NONAME00.EXE)" displays the program's output:

```
Enter value of voltage and current:
220
14
The total power=3080 watt
The address=23ae
```

ألا فخرنا حماة ما شرنا مع

الى الجميله التي وقف القلم حائراً عندها محاولاً ترتيب الحروف ليكون منها كلمات
تصف حُبِّي لها؟؟؟

الى زملائي الأعرءاء علاء، عمر، سيف، علي، حارث، محمد ولم أكن يوماً
أفضل لولا وجودكم بجانبني ☺

الى أساتذتي الأعرءاء الذين وقفوا بجانبني بكل الظروف شكراً لكم ☺

الى كل من ساهم بنشر العلم

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