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PROGRAMMING FUNDAMENTAL

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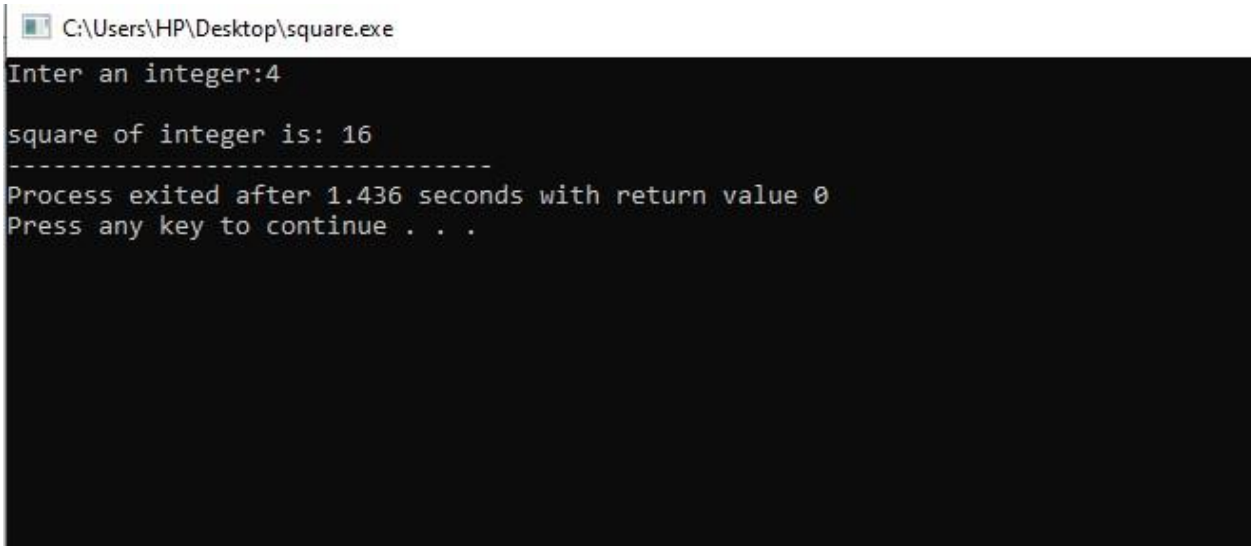
Q1 (a)

Code a function that will return square of any integer number.

```
using namespace std;
int main()
{
    double a;
    cout<<"inter an integer:";
    cin>>a;cout<<"\nsquare of integer is:" <<a*a;
```

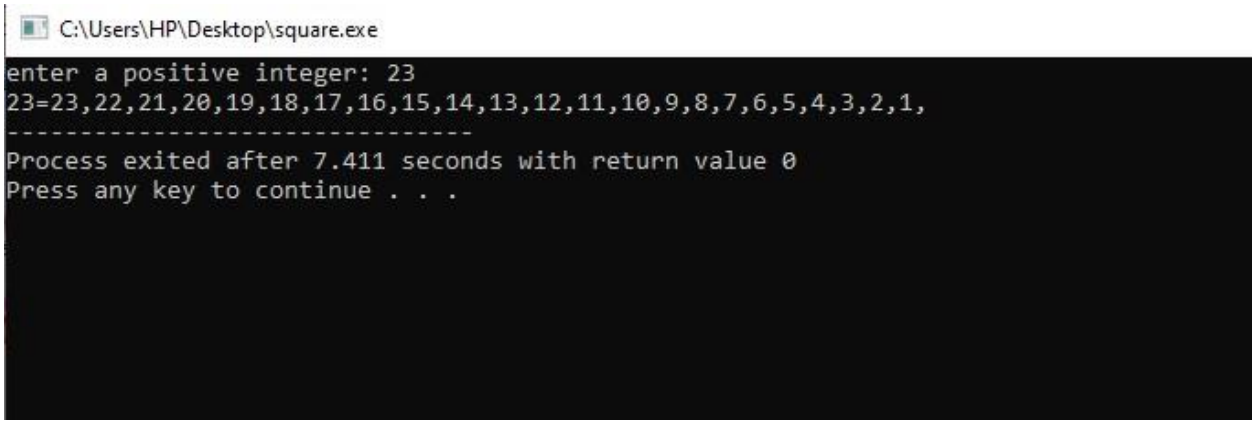


Q3 (a)

Code a function that reads a non-negative number (for example 8) and prints it in the following manner. 8 = 8, 7, 6, 5, 4, 3, 2, 1

```
#include<iostream>
using namespace std;
int main()
{
    int a;
    cout<<"enter a positive integer:";
    cin>>a;if(a>=0){
        cout<<a<<"=";
        for(int i=a;i>0;i--){
        cout<<i<<",";
        }
    }
    else{
```

```
        cout<<"\nThe integer is not positive";
    }
}
```



Q2 (a)

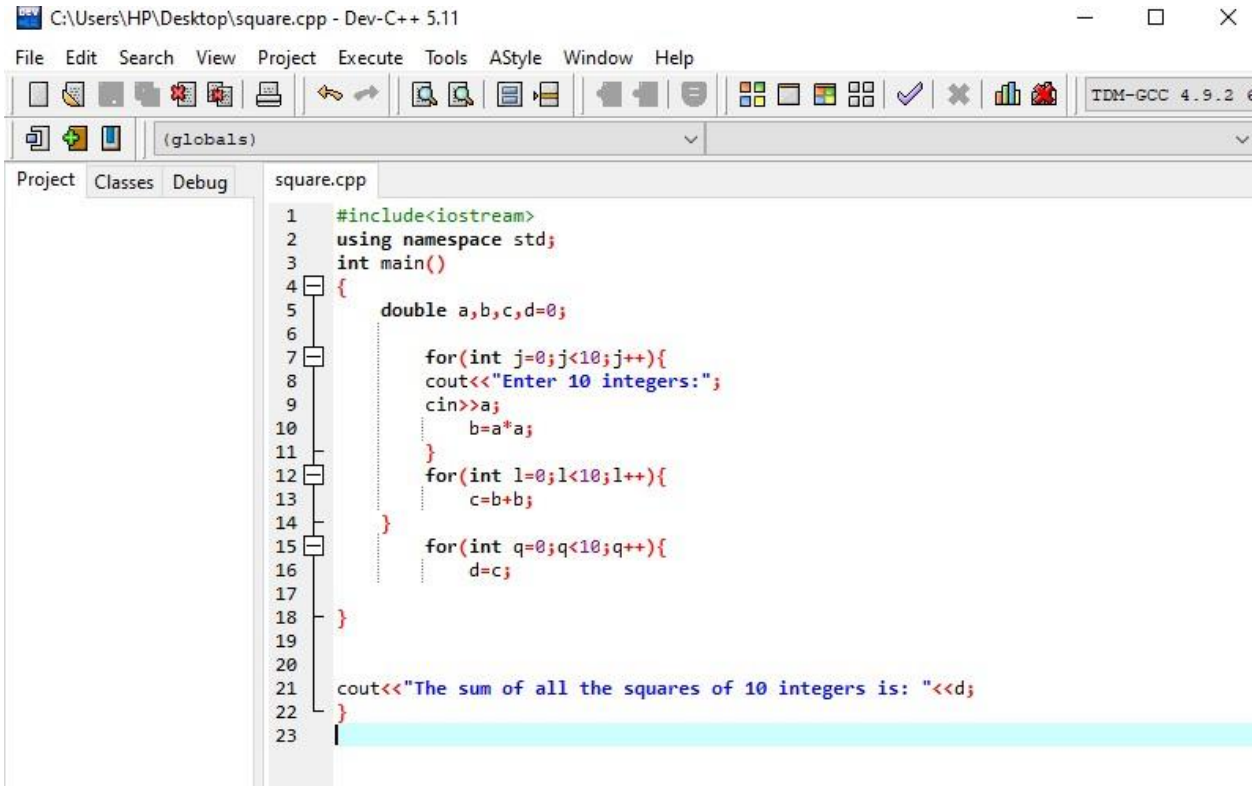
Code a program to get the following series 65, 44, 27, 14, 5, 0, -1, 2, 9, 20. Hint: The series is created by the formula 2x2 – 3x with x=-5 to 4.

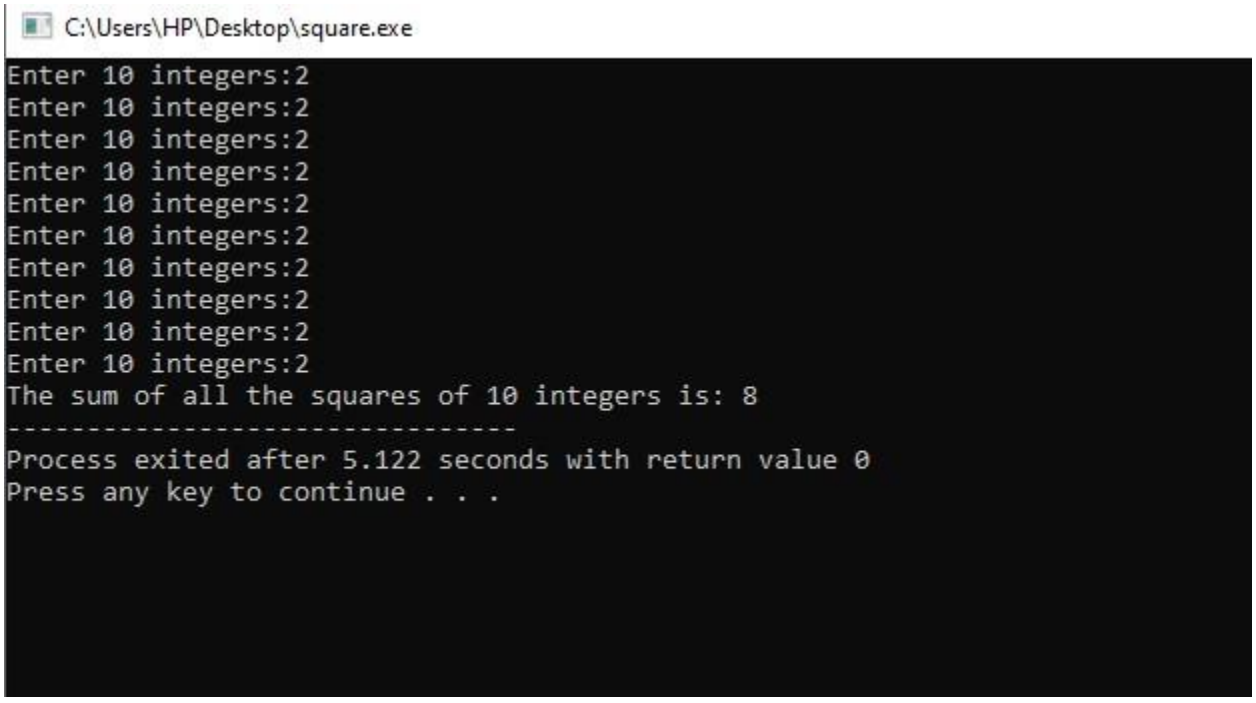
```
#include<iostream>
using namespace std;
int main()
{
    for(int a=-5; a<5;a++){
```

```
        cout<<2*a*a-3*a<<",";
    }
}
```

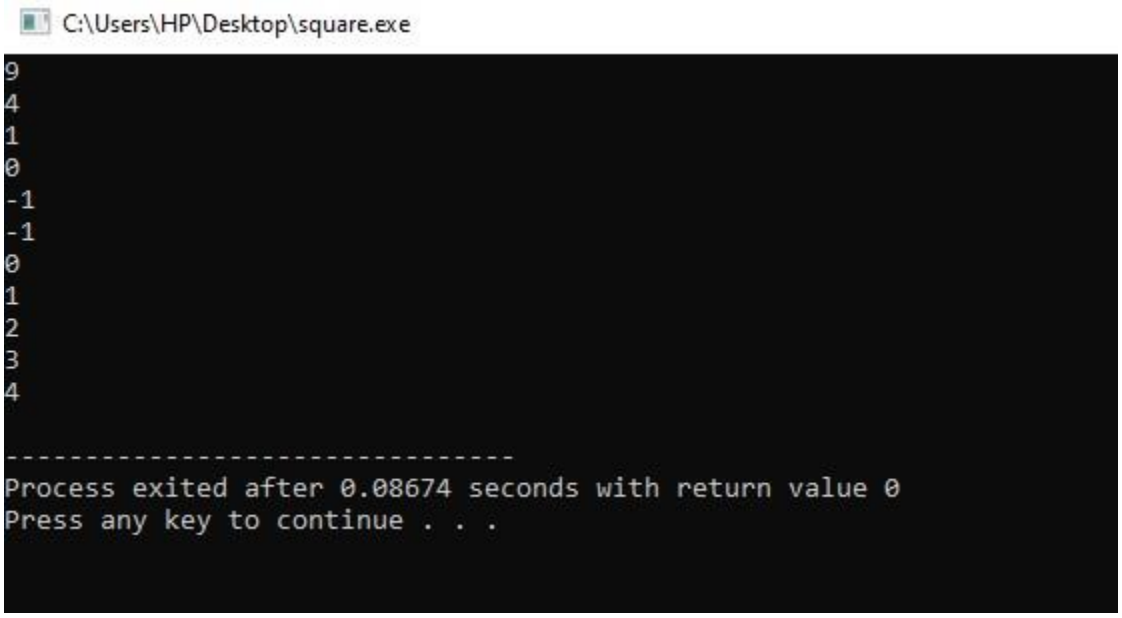
Q2 (b)

Code the following scenario, input 10 numbers from the user and take the sum of squares of each number stored in the array. Display the answer at end.


C:\Users\HP\Desktop\square.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2
(globals)
Project Classes Debug
square.cpp
#include<iostream>
using namespace std;
int main()
{
double a,b,c,d=0;
for(int j=0;j<10;j++){
cout<<"Enter 10 integers:";
cin>>a;
b=a*a;
}
for(int l=0;l<10;l++){
c=b+b;
}
for(int q=0;q<10;q++){
d=c;
}
cout<<"The sum of all the squares of 10 integers is: "<<d;
}


C:\Users\HP\Desktop\square.exe
Enter 10 integers:2
Enter 10 integers:2
Enter 10 integers:2
Enter 10 integers:2
Enter 10 integers:2
Enter 10 integers:2
Enter 10 integers:2
Enter 10 integers:2
Enter 10 integers:2
Enter 10 integers:2
The sum of all the squares of 10 integers is: 8
Process exited after 5.122 seconds with return value 0
Press any key to continue . . .

Q4 (b)



Q1(b)

Code a program where you input two 3x3 matrices from user and output the sum in matrix form

```
# include < stdio. h >
  void main()
{
    int i, j, rows, columns;
print ("Enter number of rows and columns");
scanf (" %d%d , and rows, and colums);
int a[rows], [columns], b[rows][colums],
                c [rows][colums];
Print f[" Enter first matrix: \n");
 for ( i=0; i < row; i++)
{
      for (j=0; j < columns; j++)
      {
          scanf (" %d ", and a[i][j];
      }
}
Print f ("\n Enter second matrix: \n");
 for (i=0; i < rows; i++)
  {
      for (j=0; j< columns; j++)
      {
          scanf (" %d", and b[i][j]);
      }
```

```
printf("\n Enter third matrix:\n");
    for (i=0; i<rows; i++)
    {
        for (j=0; j<columns; j++)
        {
            scanf("%d", and c[i][j]);
        }
    }
printf("\n the sum of three matrices
will be :\n");
for (i=0;  i<rows; i++)
    for (j=0;  j<columns;  j++)
    {
        print("%d ", a[i][j] + b[i]
                [0] [j] + c[i][j];
    }
    printf("\n");
    }
}
```

Q4(a)

Q4 c) A part

```
# include <iostream>
  Using namespace std;
  int main()
{
    int n;
    while (n>=0) {
    cout << n*n << "\n"; --n;
};
    cout << n << "\n"
  while (n<4) {
    cout << n++ << "\n";
    cout << n << "\n";
}
    while (n>=0) {
    cout << n << "\n";
  }
}
}
```