**DAY-1 EXPERIMENTS:**

1)ARITHMETIC OPERATIONS

#include <stdio.h>

int main()

{

int num1, num2;

int sum, sub, mult, mod;

float div;

printf("Enter any two numbers: ");

scanf("%d%d", &num1, &num2);

sum = num1 + num2;

sub = num1 - num2;

mult = num1 \* num2;

div = (float)num1 / num2;

mod = num1 % num2;

printf("SUM = %d\n", sum);

printf("DIFFERENCE = %d\n", sub);

printf("PRODUCT = %d\n", mult);

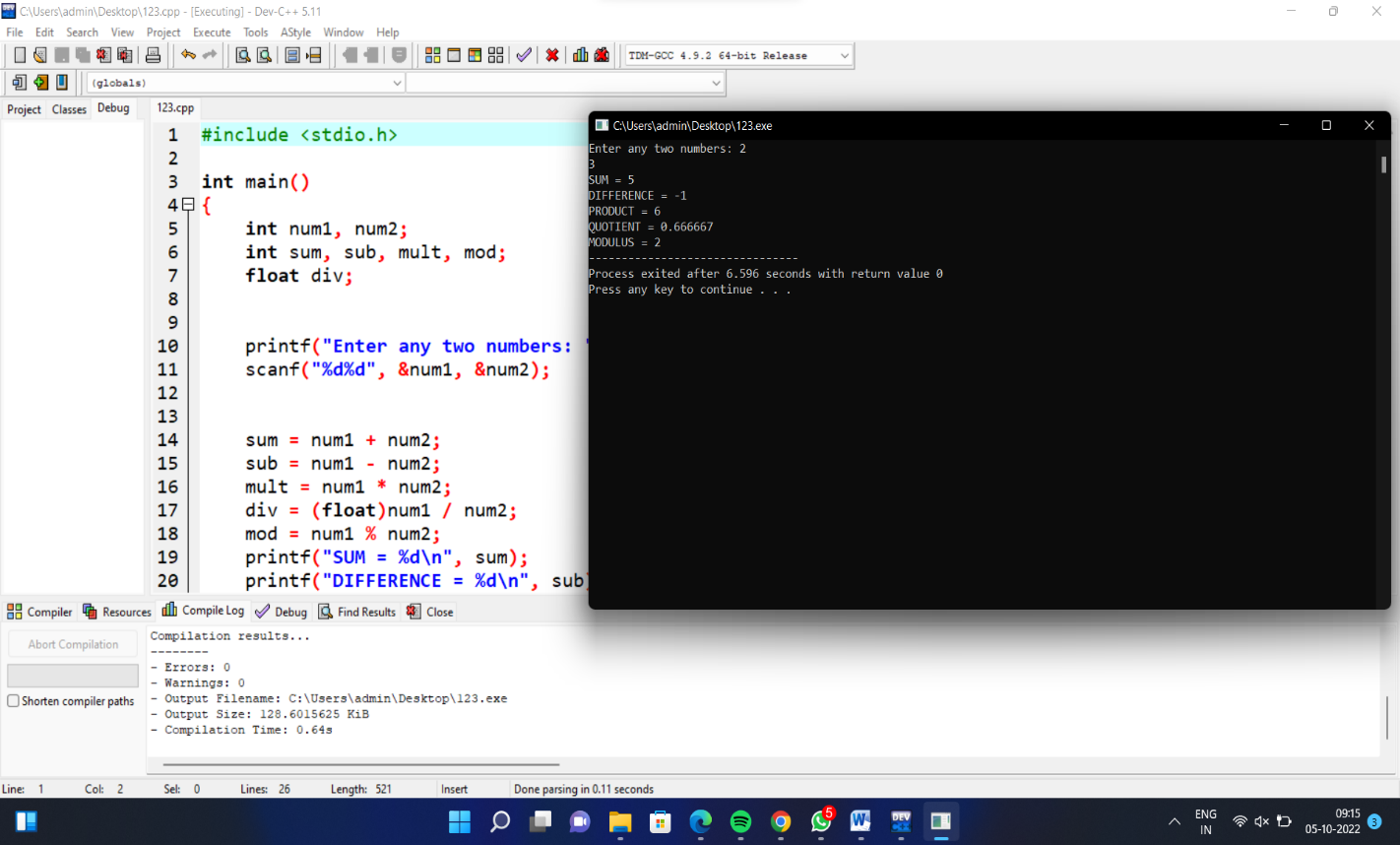
printf("QUOTIENT = %f\n", div);

printf("MODULUS = %d", mod);

return 0;

}

OUTPUT:



2)REVERSE NUMBERS

#include <stdio.h>

int main(){

int Num, rev\_Num = 0, remainder;

printf("Enter the number to reverse: ");

scanf("%d", &Num);

while (Num != 0){

remainder = Num % 10;

rev\_Num = rev\_Num \* 10 + remainder;

Num = Num/10;

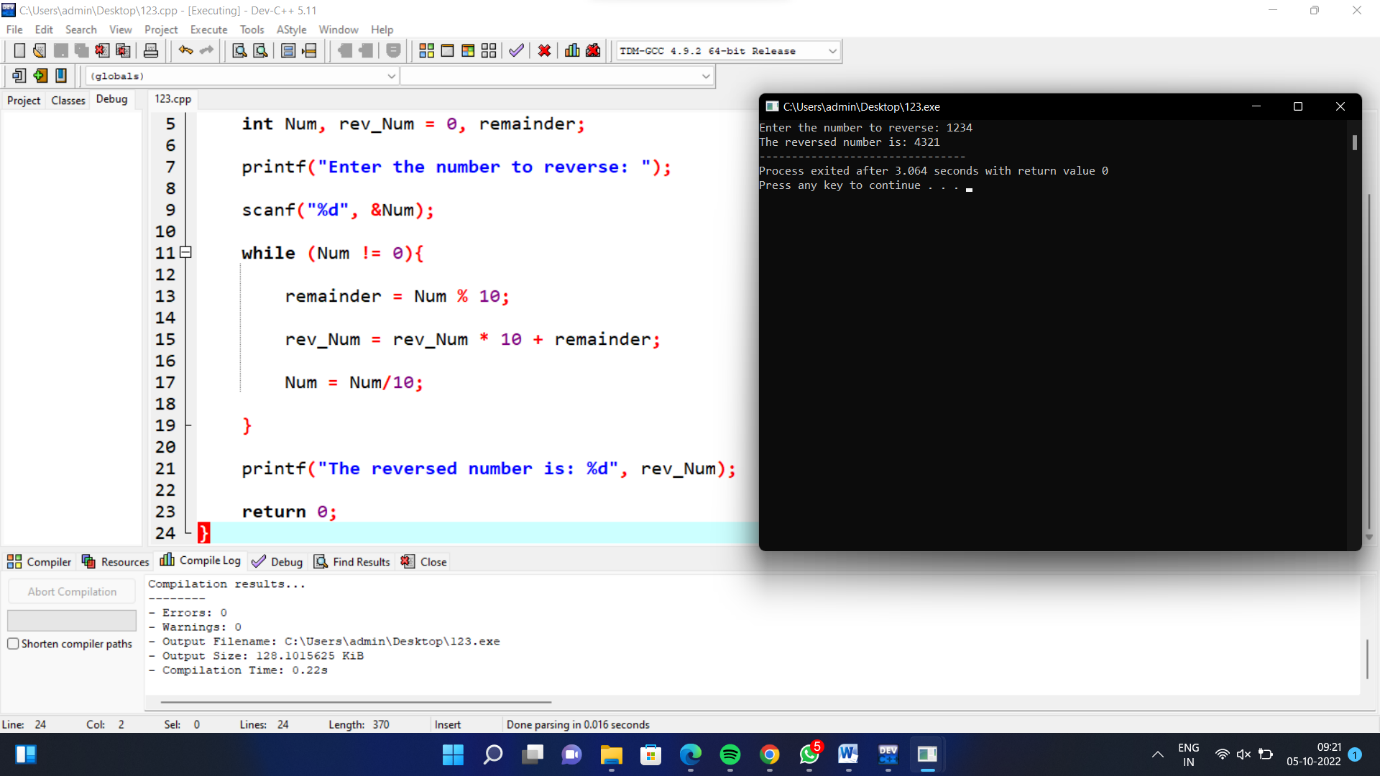
}

printf("The reversed number is: %d", rev\_Num);

return 0;

}

OUTPUT:



3)FACTORIAL:

#include <stdio.h>

int main(){

int i,f=1,num;

printf("Input the number : ");

scanf("%d",&num);

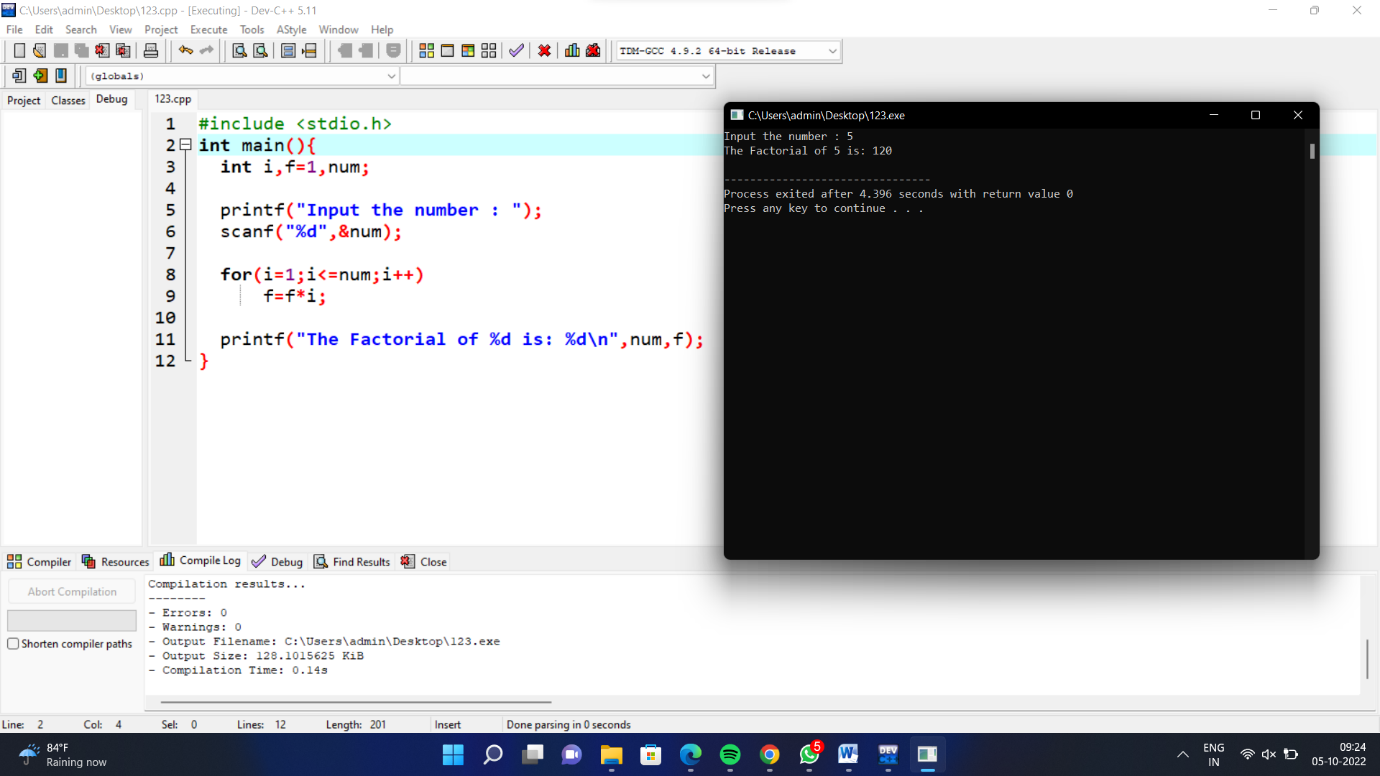
for(i=1;i<=num;i++)

f=f\*i;

printf("The Factorial of %d is: %d\n",num,f);

}

OUTPUT:



4)PERFECT NUMBER:

#include<stdio.h>

#include<conio.h>

void main()

{

int num, rem, sum = 0, i;

printf("Enter a number\n");

scanf("%d", &num);

for(i = 1; i < num; i++)

{

rem = num % i;

if (rem == 0)

{

sum = sum + i;

}

}

if (sum == num)

printf(" %d is a Perfect Number");

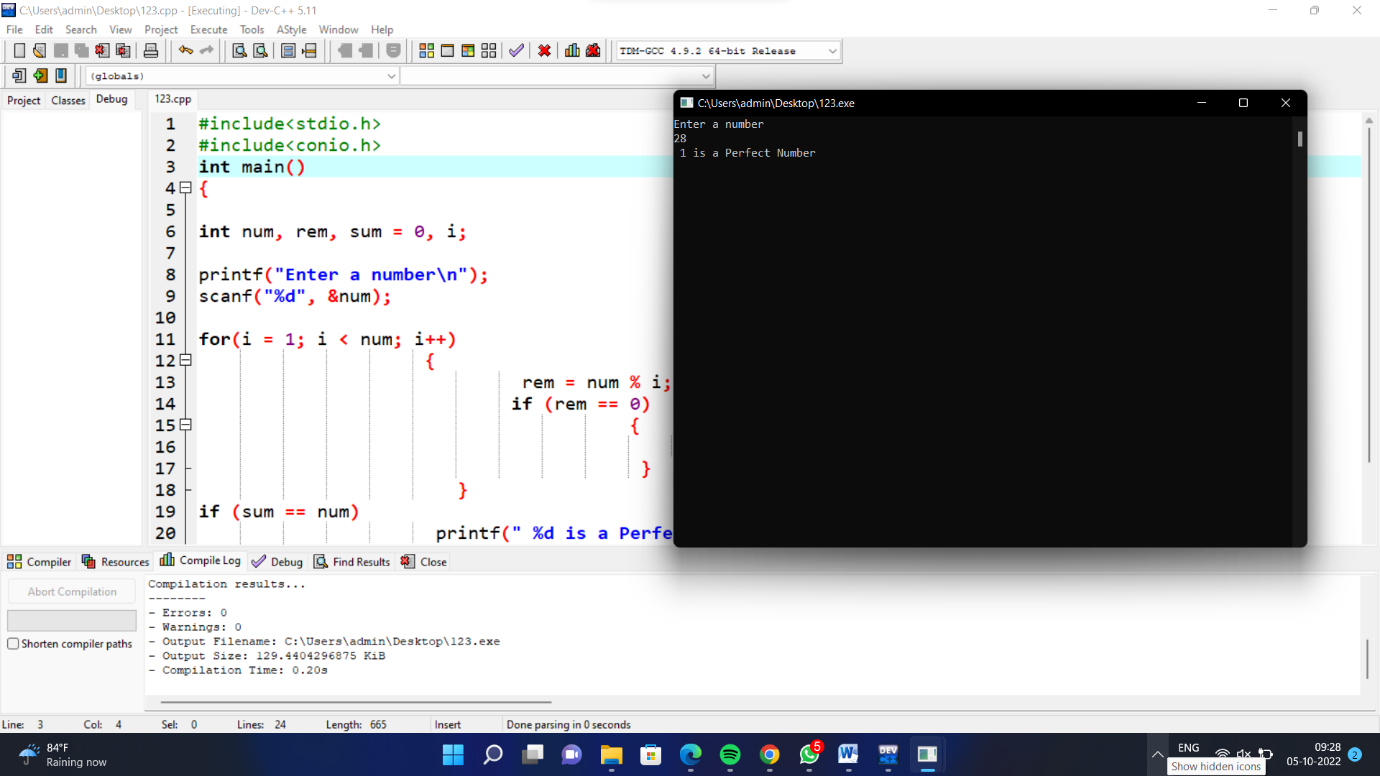
else

printf("\n %d is not a Perfect Number");

getch();

}

OUTPUT:



5)ELIGIBLE FOR VOTE:

#include<stdio.h>

int main()

{

int age;

printf("enter age:");

scanf("%d",&age);

if(age>=18){

printf("eligible to vote");

}

else{

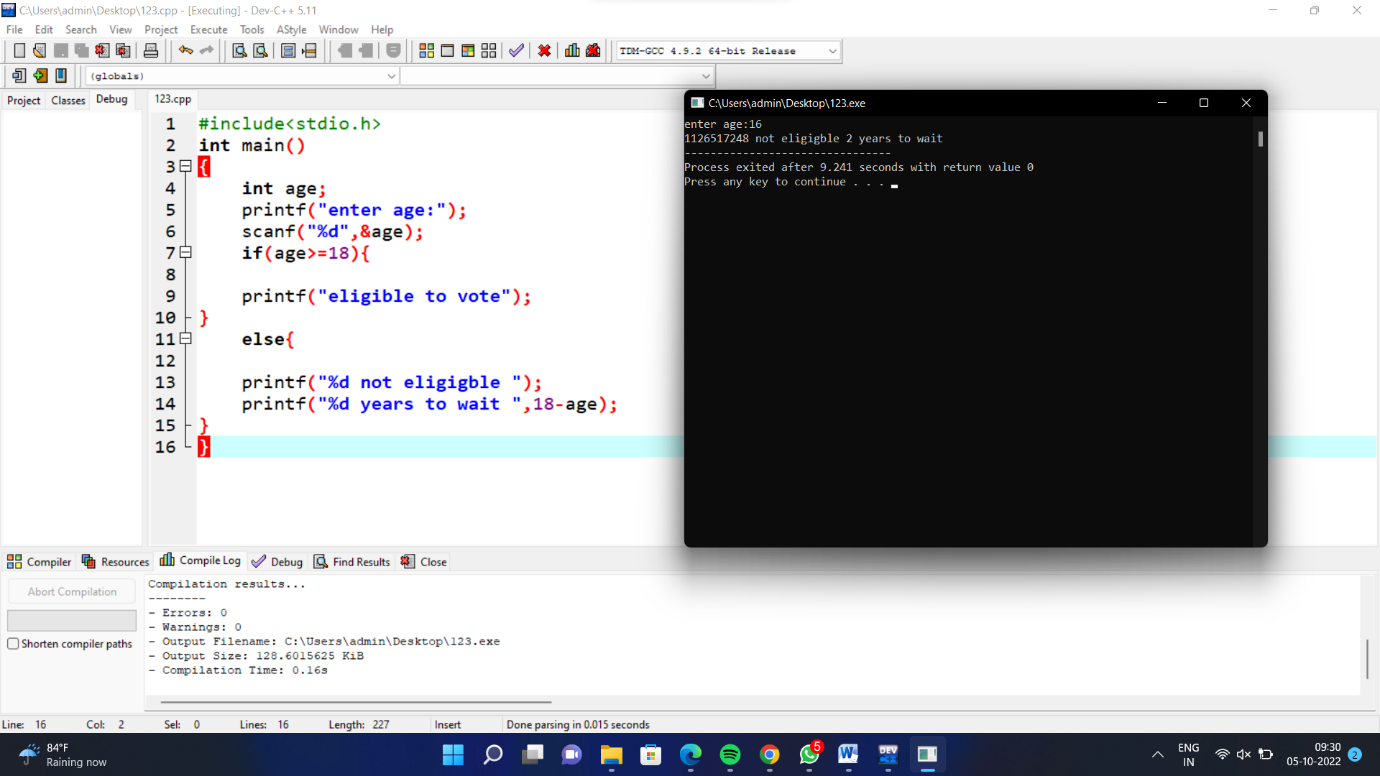
printf("%d not eligigble ");

printf("%d years to wait ",18-age);

}

}

OUTPUT:



6)EVEN OR ODD NUMBER:

#include <stdio.h>

int main() {

int num;

printf("Enter an integer: ");

scanf("%d", &num);

if(num % 2 == 0)

printf("%d is even.", num);

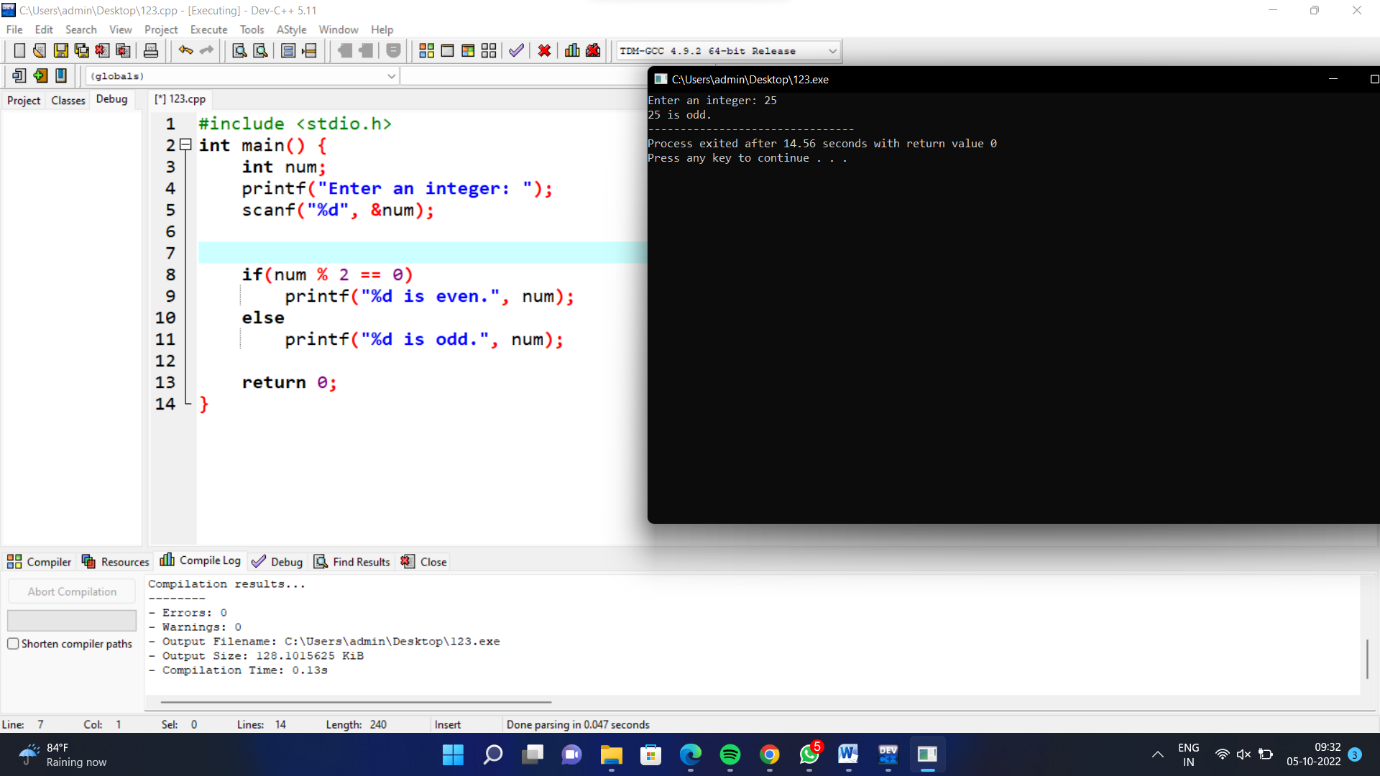
else

printf("%d is odd.", num);

return 0;

}

OUTPUT:



7)P TO Q STATEMENT:

#include<stdio.h>

int main()

{

int p,q,r,i,c=0;

printf("Enter P :");

scanf("%d",&p);

printf("Enter Q :");

scanf("%d",&q);

printf("Enter R :");

scanf("%d",&r);

for(i=p;i<=q;i++)

{

if(c!=r)

{

printf("%d ",i);

c++;

}

else

{

c++;

continue;

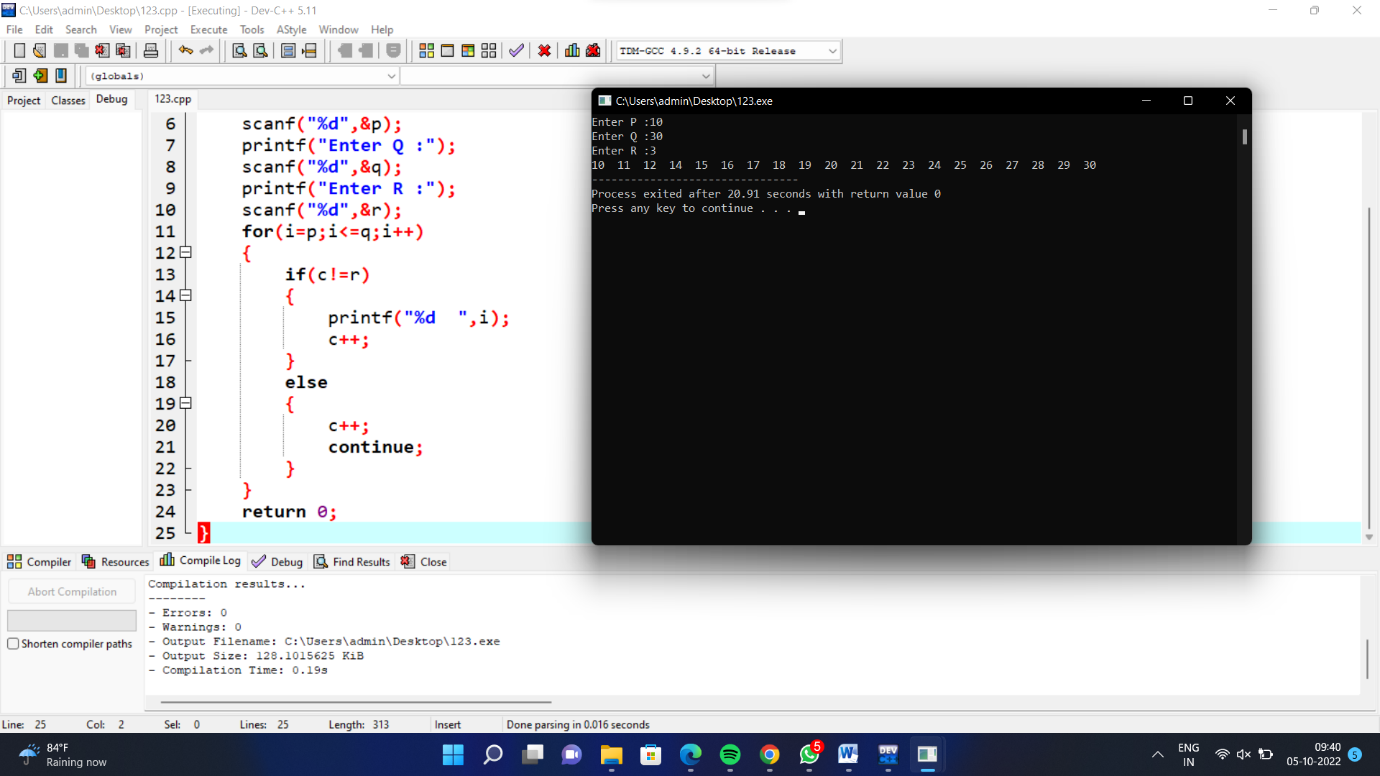
}

}

return 0;

}

OUTPUT:



8)MULTIPLICATION TABLE:

#include <stdio.h>

int main() {

int n, i, range;

printf("Enter m: ");

scanf("%d", &n);

do {

printf("Enter n: ");

scanf("%d", &range);

} while (range <= 0);

for (i = 1; i <= range; ++i) {

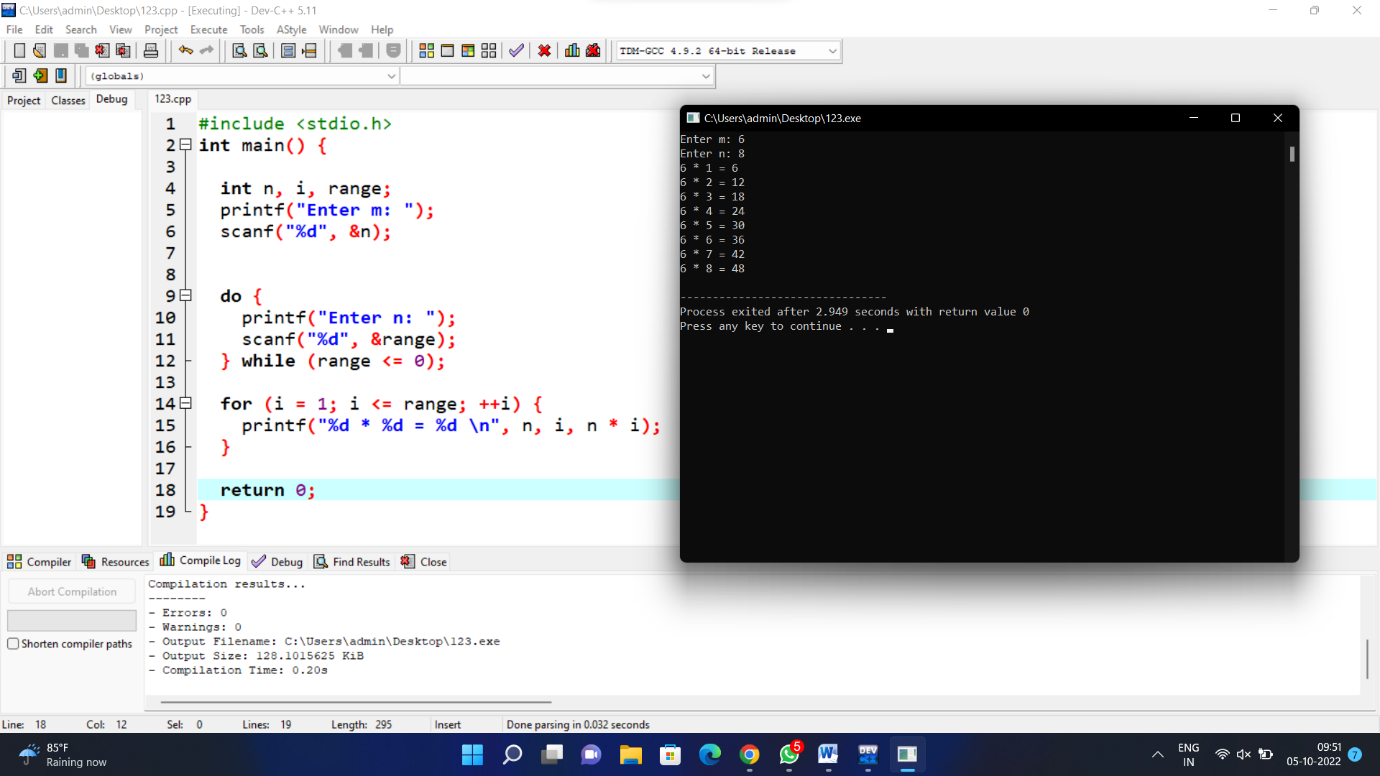
printf("%d \* %d = %d \n", n, i, n \* i);

}

return 0;

}

OUTPUT:



9)LEAP YEAR:

#include <stdio.h>

int main() {

int year;

printf("Enter a year: ");

scanf("%d", &year);

if (year % 400 == 0) {

printf("%d is a leap year.", year);

}

else if (year % 100 == 0) {

printf("%d is not a leap year.", year);

}

else if (year % 4 == 0) {

printf("%d is a leap year.", year);

}

else {

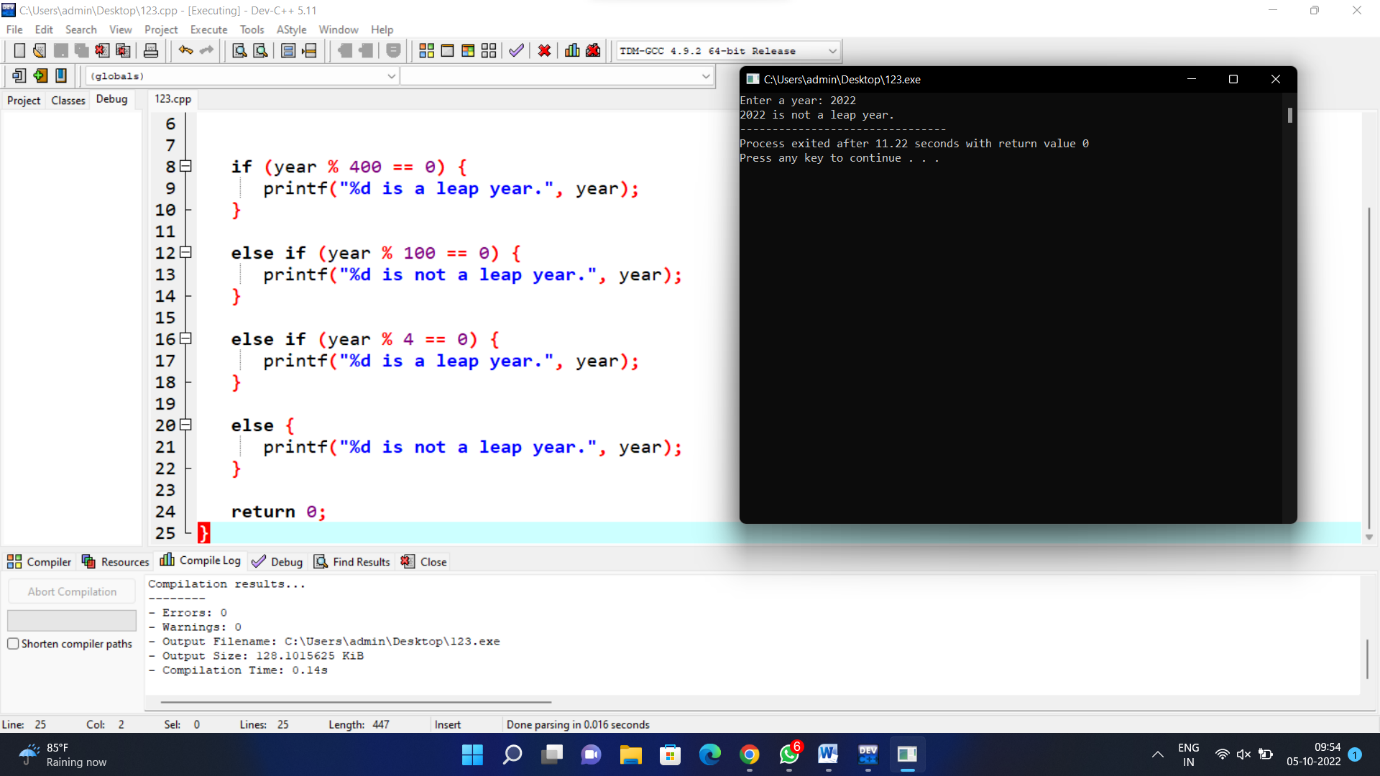
printf("%d is not a leap year.", year);

}

return 0;

}

OUTPUT:



10)SUM OF DIGITS:

#include <stdio.h>

int 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;

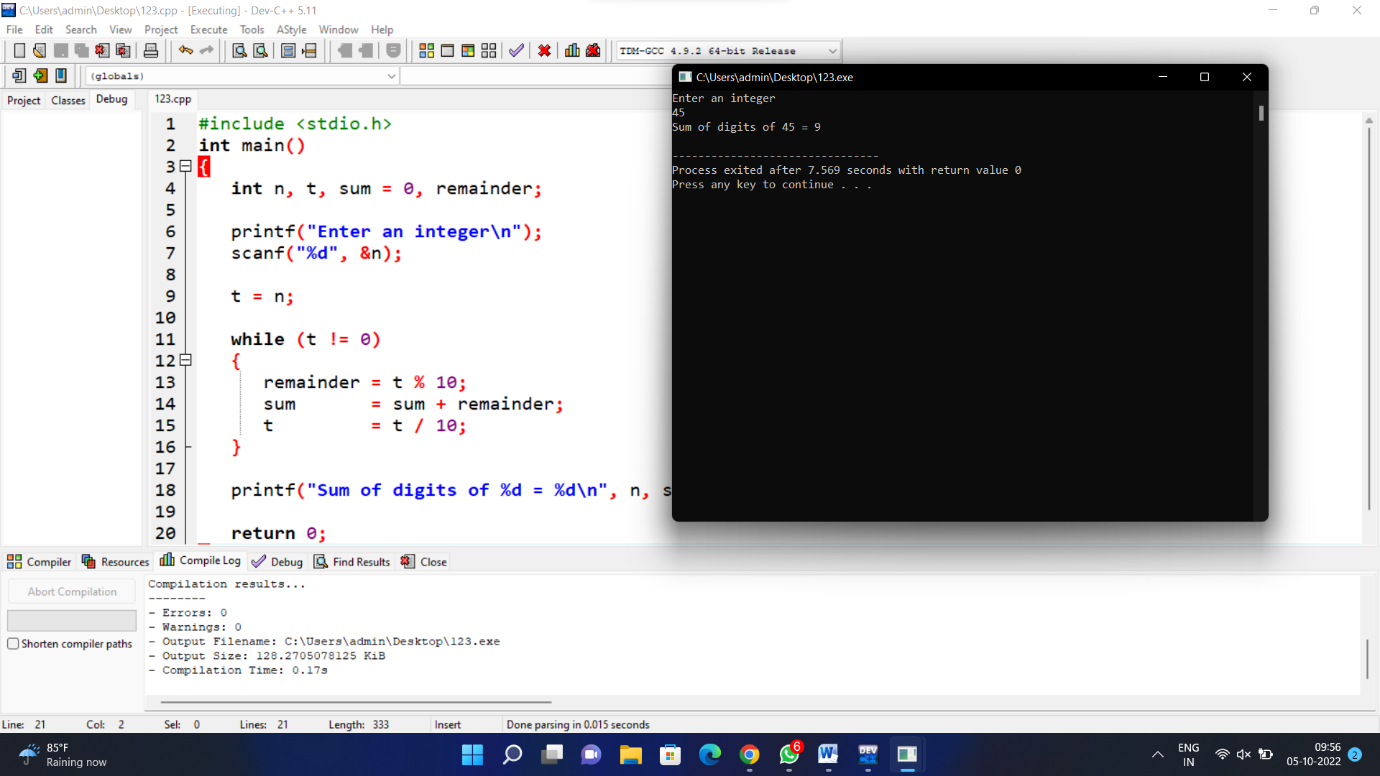
}

printf("Sum of digits of %d = %d\n", n, sum);

return 0;

}

OUTPUT:



11)PERMUTATION:

#include <stdio.h>

#include <string.h>

void swap(char \*x, char \*y)

{

char temp;

temp = \*x;

\*x = \*y;

\*y = temp;

}

void permute(char \*a, int l, int r)

{

int i;

if (l == r)

printf("%s\n", a);

else

{

for (i = l; i <= r; i++)

{

swap((a + l), (a + i));

permute(a, l + 1, r);

swap((a + l), (a + i));

}

}

}

int main()

{

char str[] = "ABC";

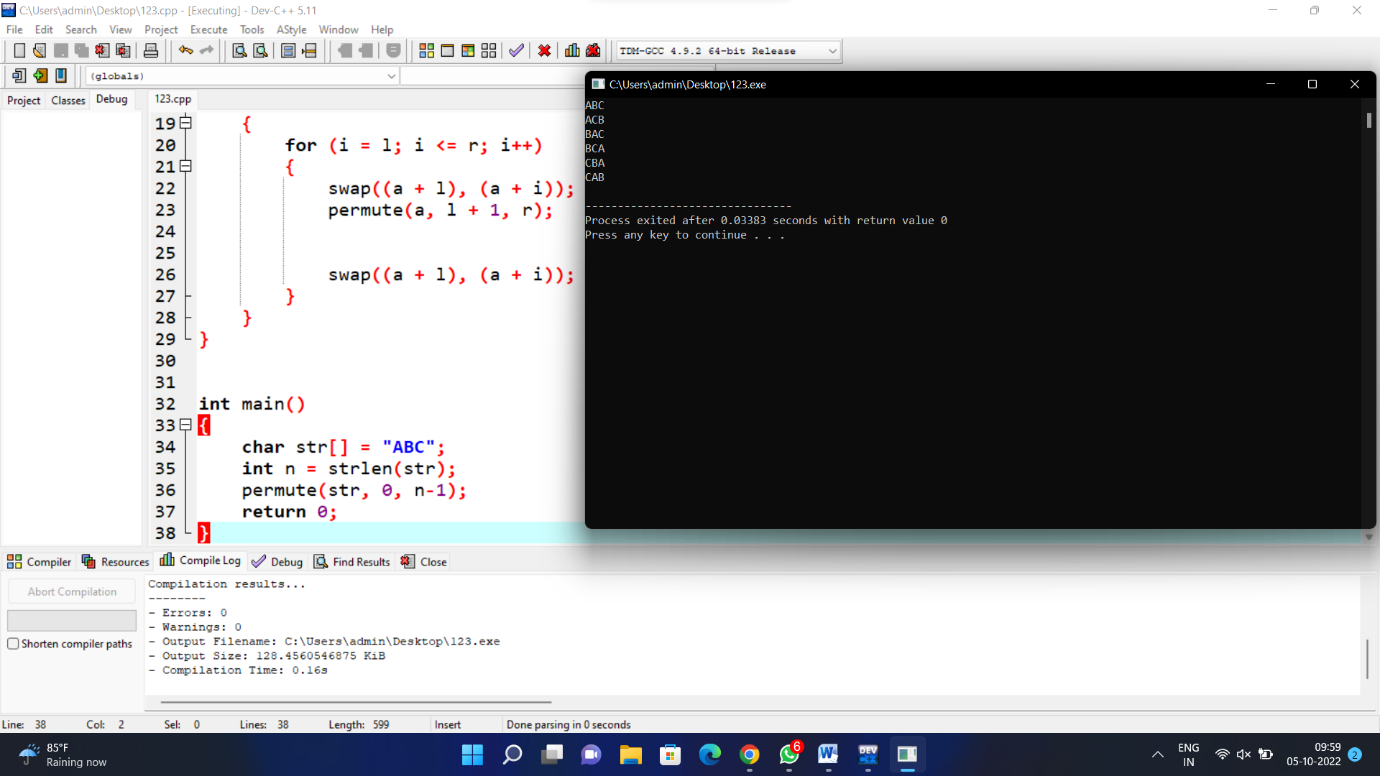
int n = strlen(str);

permute(str, 0, n-1);

return 0;

}

OUTPUT:



12)SIMPLE INTEREST:

#include <stdio.h>

int main()

{

float principle, rate, sinterest;

int time;

printf("Enter Principle Amount, Rate %% per Annum and Time\n");

scanf ("%f %f %d", &principle, &rate, &time);

sinterest = (principle \* rate \* time)/ 100.0;

printf ("Principle Amount = %5.2f\n", principle);

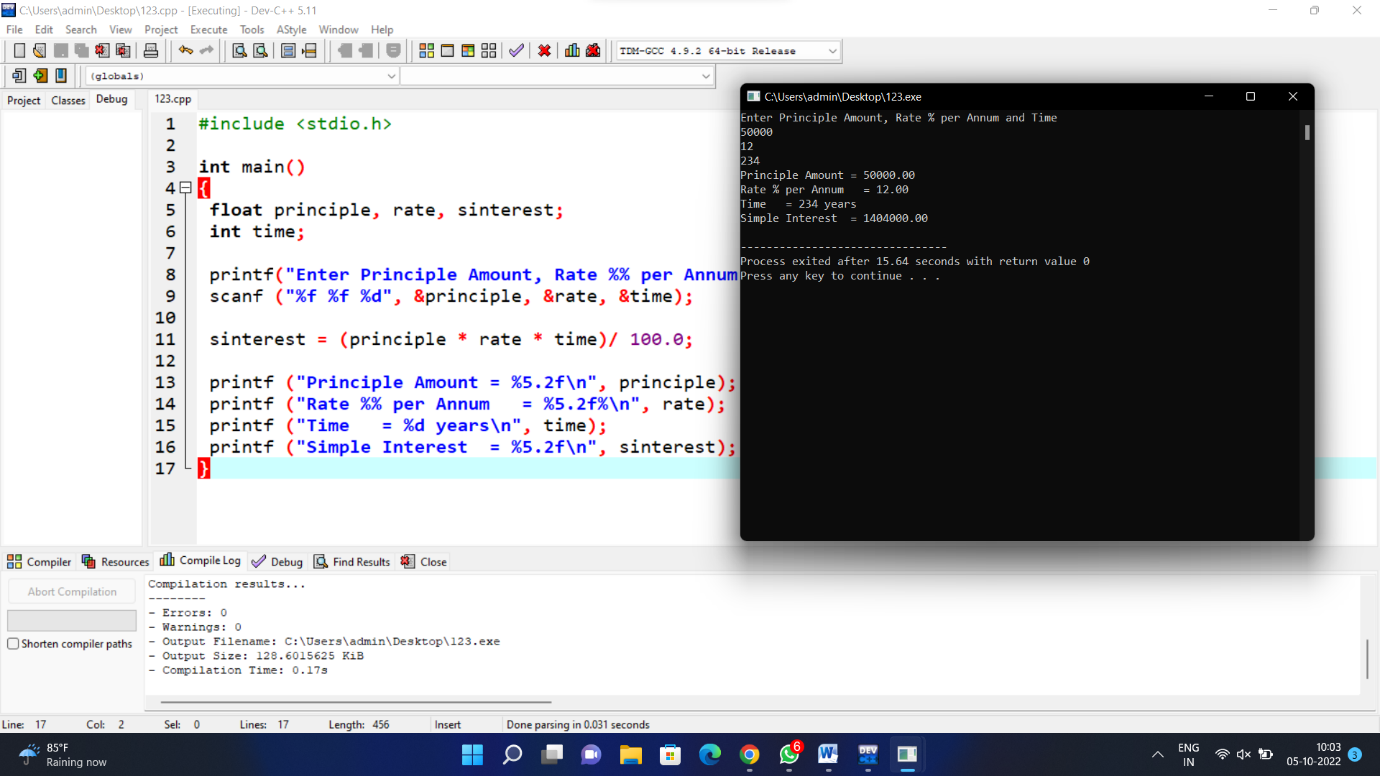
printf ("Rate %% per Annum = %5.2f%\n", rate);

printf ("Time = %d years\n", time);

printf ("Simple Interest = %5.2f\n", sinterest);

}

OUTPUT:



13)STRONG NUMBER:

#include <stdio.h>

int main()

{

int i, originalNum, num, lastDigit, sum;

long fact;

printf("Enter any number to check Strong number: ");

scanf("%d", &num);

originalNum = num;

sum = 0;

while(num > 0)

{

lastDigit = num % 10;

fact = 1;

for(i=1; i<=lastDigit; i++)

{

fact = fact \* i;

} sum = sum + fact;

num = num / 10;

}

if(sum == originalNum)

{

printf("%d is STRONG NUMBER", originalNum);

}

else

{

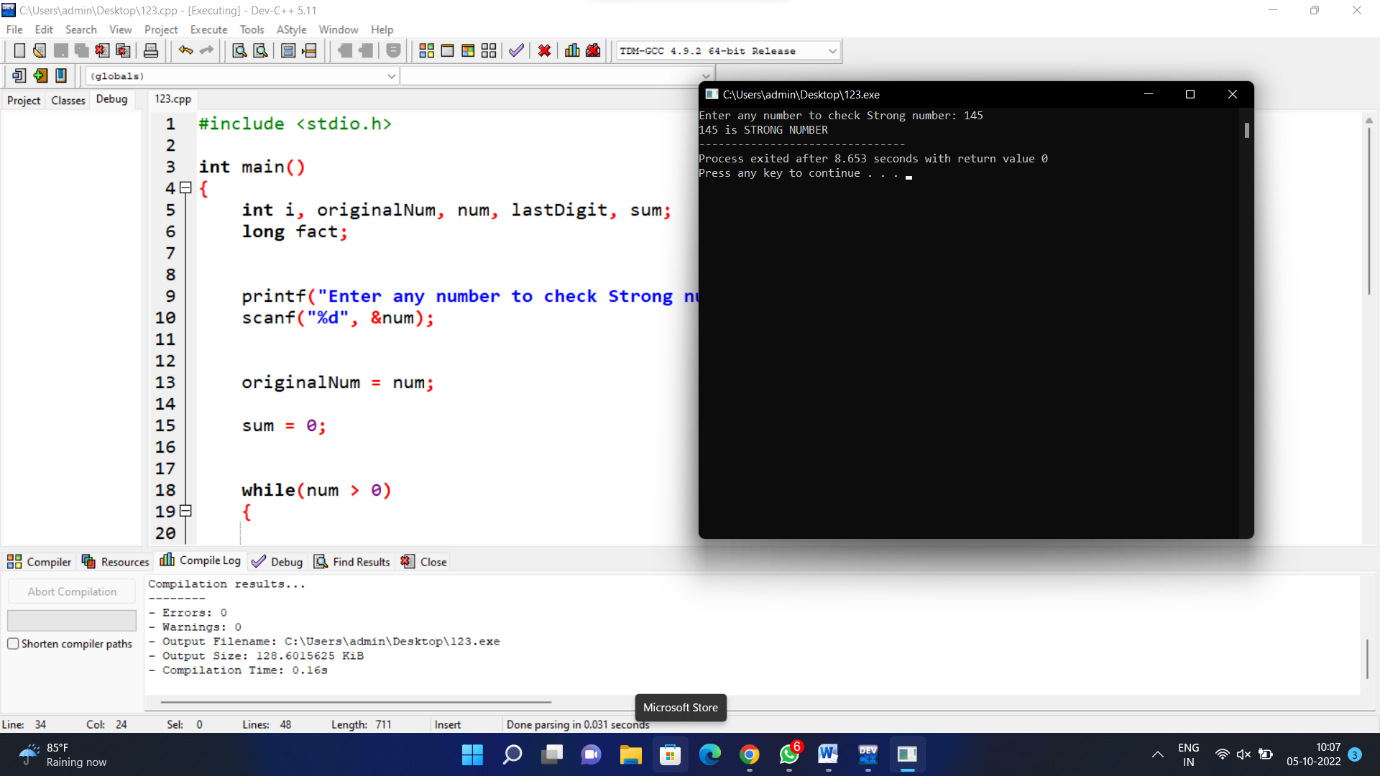
printf("%d is NOT STRONG NUMBER", originalNum);

}

return 0;

}

OUTPUT:



14)NTH PRIME NUMBER:

#include <stdio.h>

#include<math.h>

int

main ()

{

int rangenumber, c = 0, num = 2, i, letest = 0;

printf ("Enter Nth Number\n");

scanf ("%d", &rangenumber);

while (c != rangenumber)

{

int count = 0;

for (i = 2; i <= sqrt (num); i++)

{

if (num % i == 0)

{

count++;

break;

}

}

if (count == 0)

{

c++;

letest = num;

}

num = num + 1;

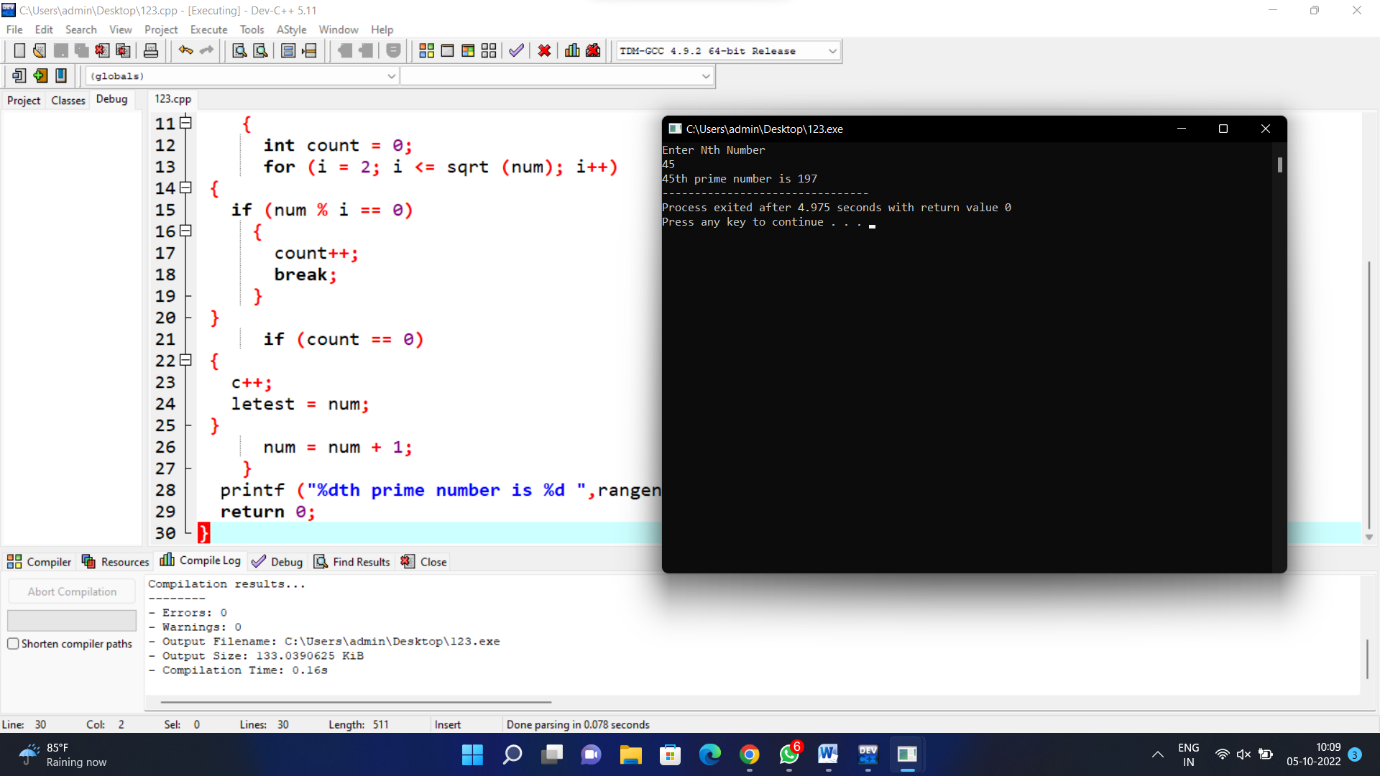
}

printf ("%dth prime number is %d ",rangenumber,letest);

return 0;

}

OUTPUT:



15)PYTHAGEROAN:

#include<stdio.h>

main(){

int initial,final,a,b,c,m,n;

printf("Enter the range in which you want to search for Pythagorean Triplets:\nInitial: ");

scanf("%d",&initial);

printf("\nFinal: ");

scanf("%d",&final);

printf("The Pythogorean Triplets in the given range are as follows:\n\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n");

for(m=initial;m<=final;m++){

for(n=initial;n<=final;n++){

a=m\*m-n\*n;

b=2\*m\*n;

c=m\*m+n\*n;

if(a<=final&&b<=final&&c<=final&&a>=initial&&b>=initial&&c>=initial){

printf("%d , %d , %d\n",a,b,c);

}

}

}

}

OUTPUT:

