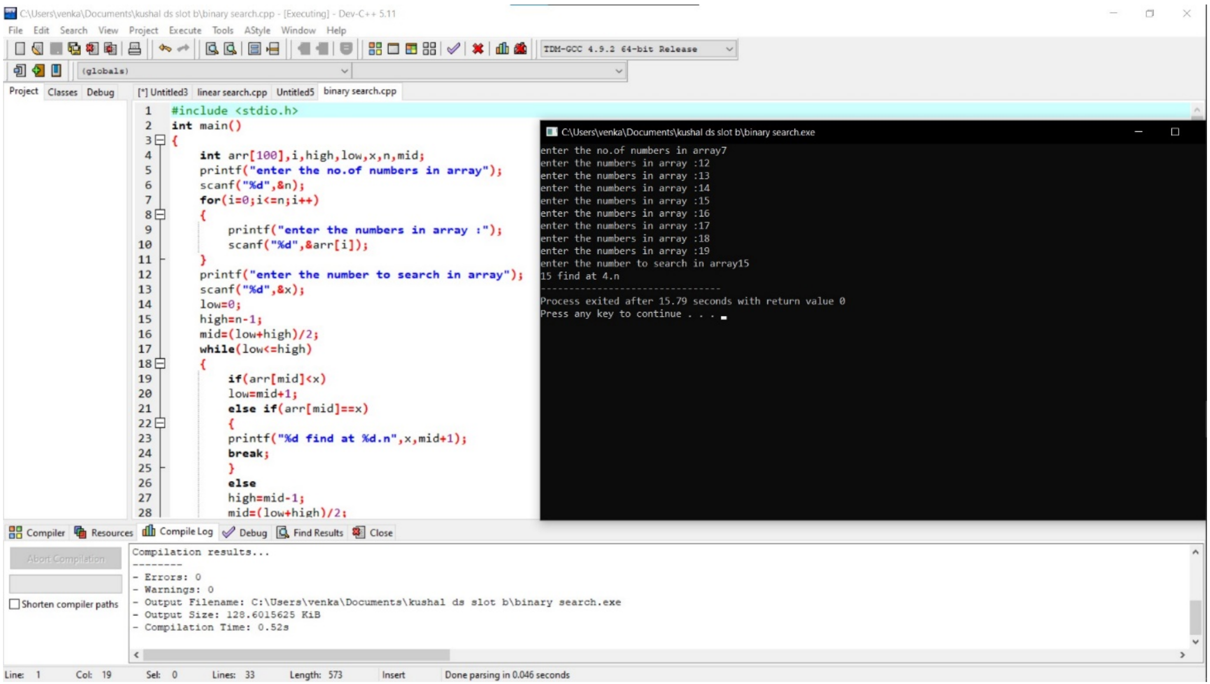
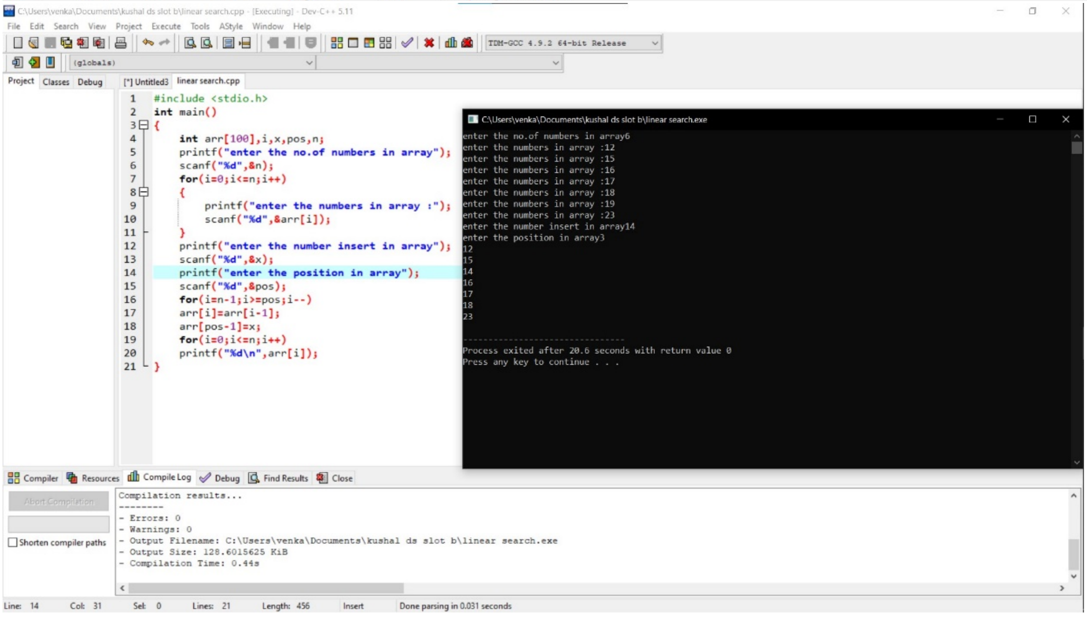
BINARY SEARCH


C:\Users\venka\Documents\kushal ds slot b\binary search.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
[*] Untitled3 linear search.cpp Untitled5 binary search.cpp
C:\Users\venka\Documents\kushal ds slot b\binary search.exe
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Shorten compiler paths
Line: 1 Col: 19 Sel: 0 Lines: 33 Length: 573 Insert Done parsing in 0.046 seconds

```
#include <stdio.h>
int main()
{
    int arr[100],i,high,low,x,n,mid;
    printf("enter the no.of numbers in array");
    scanf("%d",&n);
    for(i=0;i<=n;i++)
    {
        printf("enter the numbers in array :");
        scanf("%d",&arr[i]);
    }
    printf("enter the number to search in array");
    scanf("%d",&x);
    low=0;
    high=n-1;
    mid=(low+high)/2;
    while(low<=high)
    {
        if(arr[mid]<x)
        low=mid+1;
        else if(arr[mid]==x)
        {
        printf("%d find at %d.n",x,mid+1);
        break;
        }
        else
        high=mid-1;
        mid=(low+high)/2;
```

```
enter the no.of numbers in array7
enter the numbers in array :12
enter the numbers in array :13
enter the numbers in array :14
enter the numbers in array :15
enter the numbers in array :16
enter the numbers in array :17
enter the numbers in array :18
enter the numbers in array :19
enter the number to search in array15
15 find at 4.n
--------------------------------
Process exited after 15.79 seconds with return value 0
Press any key to continue . . .
```

```
Compilation results...
--------
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\venka\Documents\kushal ds slot b\binary search.exe
- Output Size: 128.6015625 KiB
- Compilation Time: 0.52s
```


C:\Users\venka\Documents\kushal ds slot b\linear search.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
[*] Untitled3 linear search.cpp
C:\Users\venka\Documents\kushal ds slot b\linear search.exe
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Shorten compiler paths
Line: 14 Col: 31 Sel: 0 Lines: 21 Length: 456 Insert Done parsing in 0.031 seconds

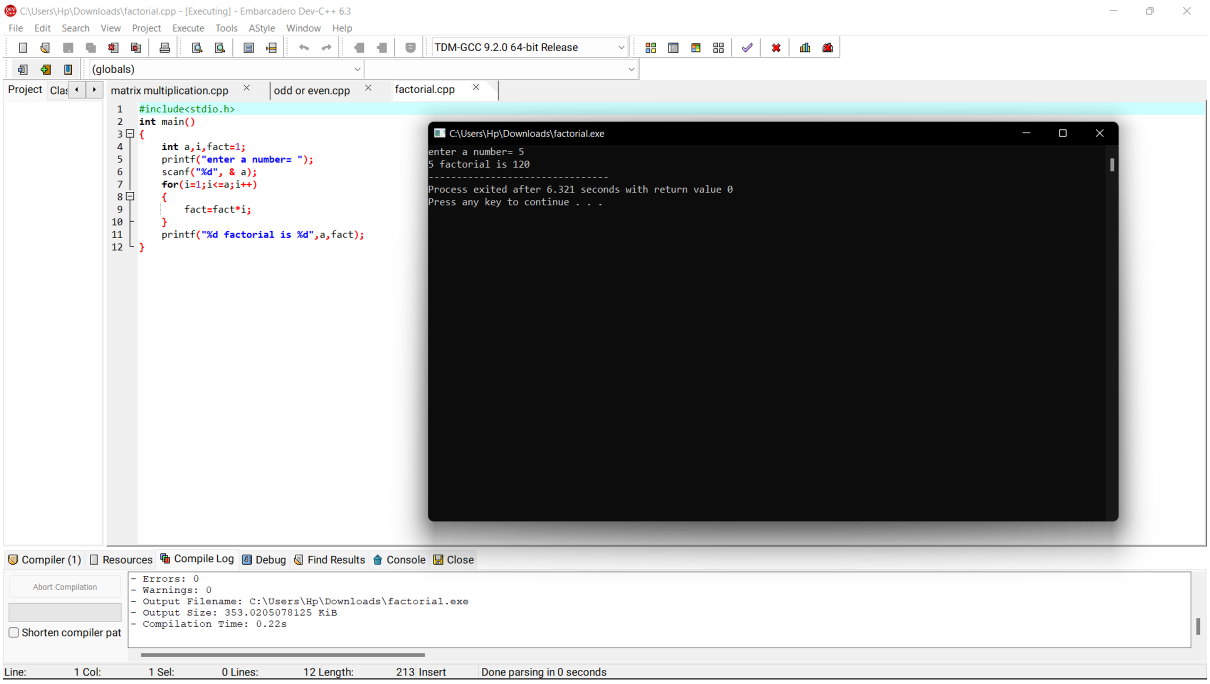
```
#include <stdio.h>
int main()
{
    int arr[100],i,x,pos,n;
    printf("enter the no.of numbers in array");
    scanf("%d",&n);
    for(i=0;i<=n;i++)
    {
        printf("enter the numbers in array :");
        scanf("%d",&arr[i]);
    }
    printf("enter the number insert in array");
    scanf("%d",&x);
    printf("enter the position in array");
    scanf("%d",&pos);
    for(i=n-1;i>=pos;i--)
    arr[i]=arr[i-1];
    arr[pos-1]=x;
    for(i=0;i<=n;i++)
    printf("%d\n",arr[i]);
}
```

```
enter the no.of numbers in array6
enter the numbers in array :12
enter the numbers in array :15
enter the numbers in array :16
enter the numbers in array :17
enter the numbers in array :18
enter the numbers in array :19
enter the numbers in array :23
enter the number insert in array14
enter the position in array3
12
15
14
16
17
18
23

--------------------------------
Process exited after 20.6 seconds with return value 0
Press any key to continue . . .
```

```
Compilation results...
--------
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\venka\Documents\kushal ds slot b\linear search.exe
- Output Size: 128.6015625 KiB
- Compilation Time: 0.44s
```

INSERTION OF NUMBER

FACTORIAL



C:\Users\Hp\Downloads\factorial.cpp - [Executing] - Embarcadero Dev-C++ 6.3

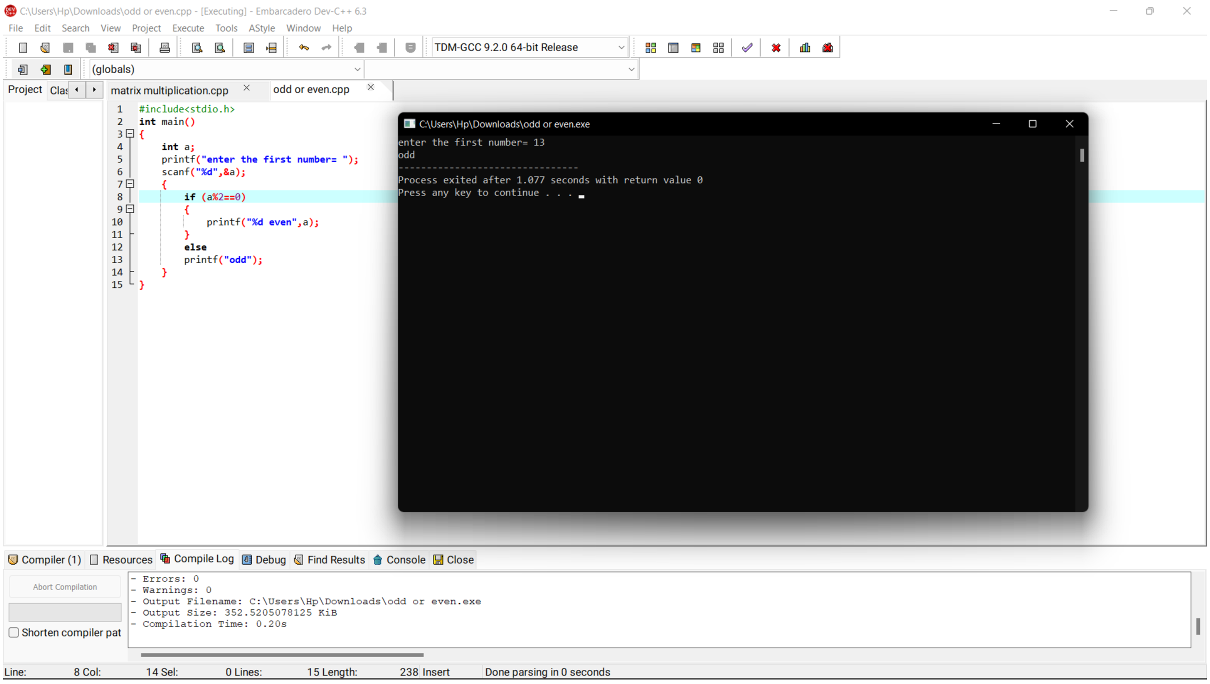
```
#include<stdio.h>
int main()
{
    int a,i,fact=1;
    printf("enter a number= ");
    scanf("%d", & a);
    for(i=1;i<=a;i++)
    {
        fact=fact*i;
    }
    printf("%d factorial is %d",a,fact);
}
```

```
enter a number= 5
5 factorial is 120
--------------------------------
Process exited after 6.321 seconds with return value 0
Press any key to continue . . .
```

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Hp\Downloads\factorial.exe
- Output Size: 353.0205078125 KiB
- Compilation Time: 0.22s
```

Line: 1 Col: 1 Sel: 0 Lines: 12 Length: 213 Insert Done parsing in 0 seconds

ODD OR EVEN



C:\Users\Hp\Downloads\odd or even.cpp - [Executing] - Embarcadero Dev-C++ 6.3

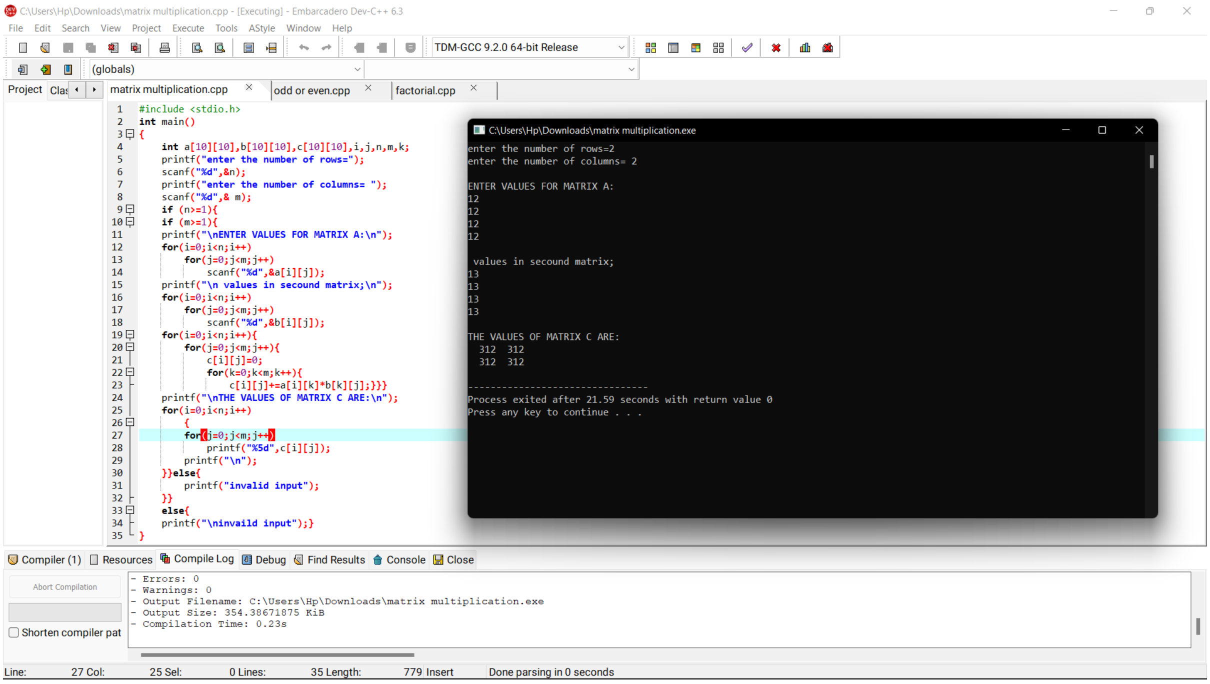
```
#include<stdio.h>
int main()
{
    int a;
    printf("enter the first number= ");
    scanf("%d",&a);
    {
        if (a%2==0)
        {
            printf("%d even",a);
        }
        else
        printf("odd");
    }
}
```

```
enter the first number= 13
odd
--------------------------------
Process exited after 1.077 seconds with return value 0
Press any key to continue . . .
```

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Hp\Downloads\odd or even.exe
- Output Size: 352.5205078125 KiB
- Compilation Time: 0.20s
```

Line: 8 Col: 14 Sel: 0 Lines: 15 Length: 238 Insert Done parsing in 0 seconds

MULTIPLICATION

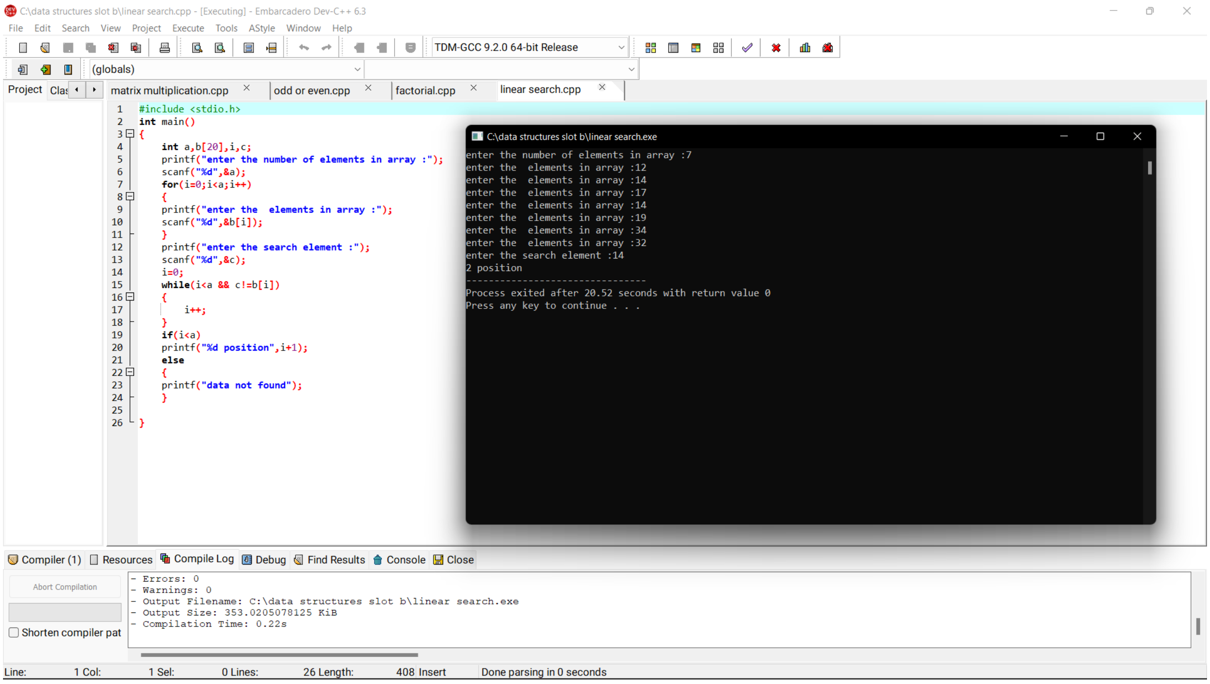

C:\Users\Hp\Downloads\matrix multiplication.cpp - [Executing] - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
(globals)
Project Clas
matrix multiplication.cpp
odd or even.cpp
factorial.cpp
C:\Users\Hp\Downloads\matrix multiplication.exe
Compiler (1) Resources Compile Log Debug Find Results Console Close
Abort Compilation
□ Shorten compiler pat
Line: 27 Col: 25 Sel: 0 Lines: 35 Length: 779 Insert Done parsing in 0 seconds

```
#include <stdio.h>
int main()
{
    int a[10][10],b[10][10],c[10][10],i,j,n,m,k;
    printf("enter the number of rows=");
    scanf("%d",&n);
    printf("enter the number of columns= ");
    scanf("%d",& m);
    if (n>=1){
    if (m>=1){
    printf("\nENTER VALUES FOR MATRIX A:\n");
    for(i=0;i<n;i++)
        for(j=0;j<m;j++)
            scanf("%d",&a[i][j]);
    printf("\n values in secound matrix;\n");
    for(i=0;i<n;i++)
        for(j=0;j<m;j++)
            scanf("%d",&b[i][j]);
    for(i=0;i<n;i++){
        for(j=0;j<m;j++){
            c[i][j]=0;
            for(k=0;k<m;k++){
                c[i][j]+=a[i][k]*b[k][j];}}}
    printf("\nTHE VALUES OF MATRIX C ARE:\n");
    for(i=0;i<n;i++)
        {
        for(j=0;j<m;j++)
            printf("%5d",c[i][j]);
        printf("\n");
    }}else{
        printf("invalid input");
    }}
    else{
    printf("\ninvaild input");;}
}
```

```
enter the number of rows=2
enter the number of columns= 2

ENTER VALUES FOR MATRIX A:
12
12
12
12

 values in secound matrix;
13
13
13
13

THE VALUES OF MATRIX C ARE:
  312  312
  312  312

--------------------------------
Process exited after 21.59 seconds with return value 0
Press any key to continue . . .
```

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Hp\Downloads\matrix multiplication.exe
- Output Size: 354.38671875 KiB
- Compilation Time: 0.23s
```

Linear search

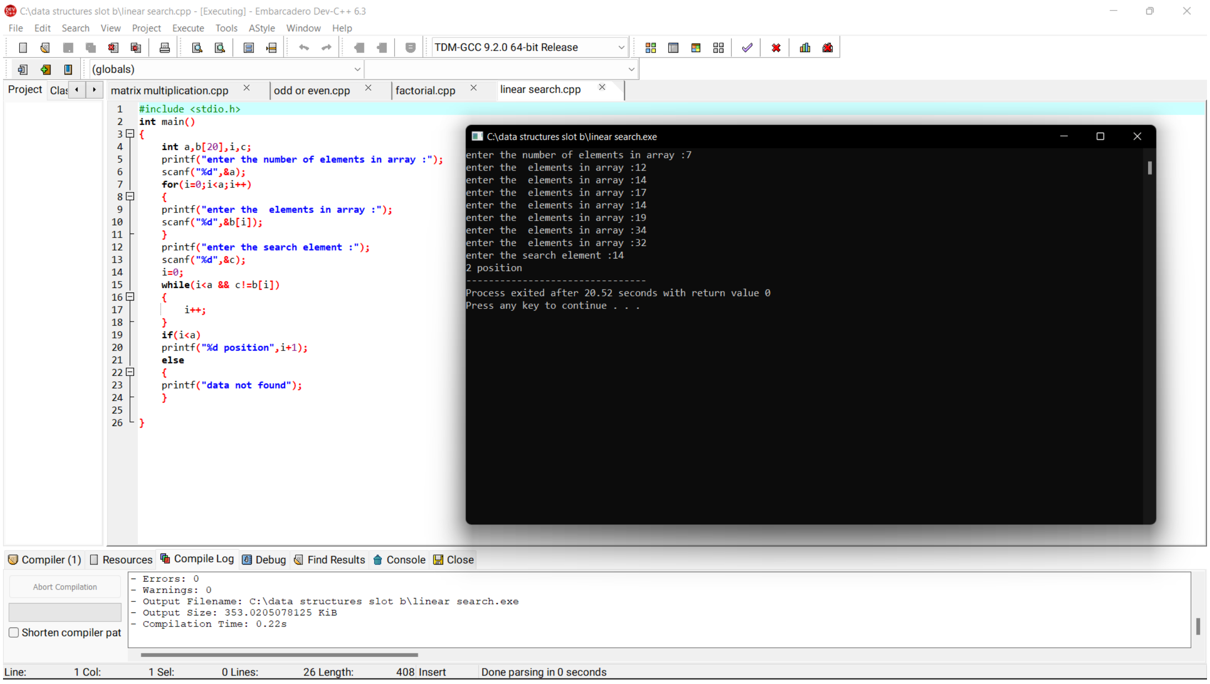

C:\data structures slot b\linear search.cpp - [Executing] - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
(globals)
Project Clas
matrix multiplication.cpp
odd or even.cpp
factorial.cpp
linear search.cpp
C:\data structures slot b\linear search.exe
Compiler (1) Resources Compile Log Debug Find Results Console Close
Abort Compilation
□ Shorten compiler pat
Line: 1 Col: 1 Sel: 0 Lines: 26 Length: 408 Insert Done parsing in 0 seconds

```
#include <stdio.h>
int main()
{
    int a,b[20],i,c;
    printf("enter the number of elements in array :");
    scanf("%d",&a);
    for(i=0;i<a;i++)
    {
    printf("enter the  elements in array :");
    scanf("%d",&b[i]);
    }
    printf("enter the search element :");
    scanf("%d",&c);
    i=0;
    while(i<a && c!=b[i])
    {
        i++;
    }
    if(i<a)
    printf("%d position",i+1);
    else
    {
    printf("data not found");
    }

}
```

```
enter the number of elements in array :7
enter the  elements in array :12
enter the  elements in array :14
enter the  elements in array :17
enter the  elements in array :14
enter the  elements in array :19
enter the  elements in array :34
enter the  elements in array :32
enter the search element :14
2 position
--------------------------------
Process exited after 20.52 seconds with return value 0
Press any key to continue . . .
```

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\data structures slot b\linear search.exe
- Output Size: 353.0205078125 KiB
- Compilation Time: 0.22s
```

Fibonacci series



C:\data structures slot b\linear search.cpp - [Executing] - Embarcadero Dev-C++ 6.3

```c
#include <stdio.h>
int main()
{
    int a,b[20],i,c;
    printf("enter the number of elements in array :");
    scanf("%d",&a);
    for(i=0;i<a;i++)
    {
    printf("enter the  elements in array :");
    scanf("%d",&b[i]);
    }
    printf("enter the search element :");
    scanf("%d",&c);
    i=0;
    while(i<a && c!=b[i])
    {
        i++;
    }
    if(i<a)
    printf("%d position",i+1);
    else
    {
    printf("data not found");
    }

}
```

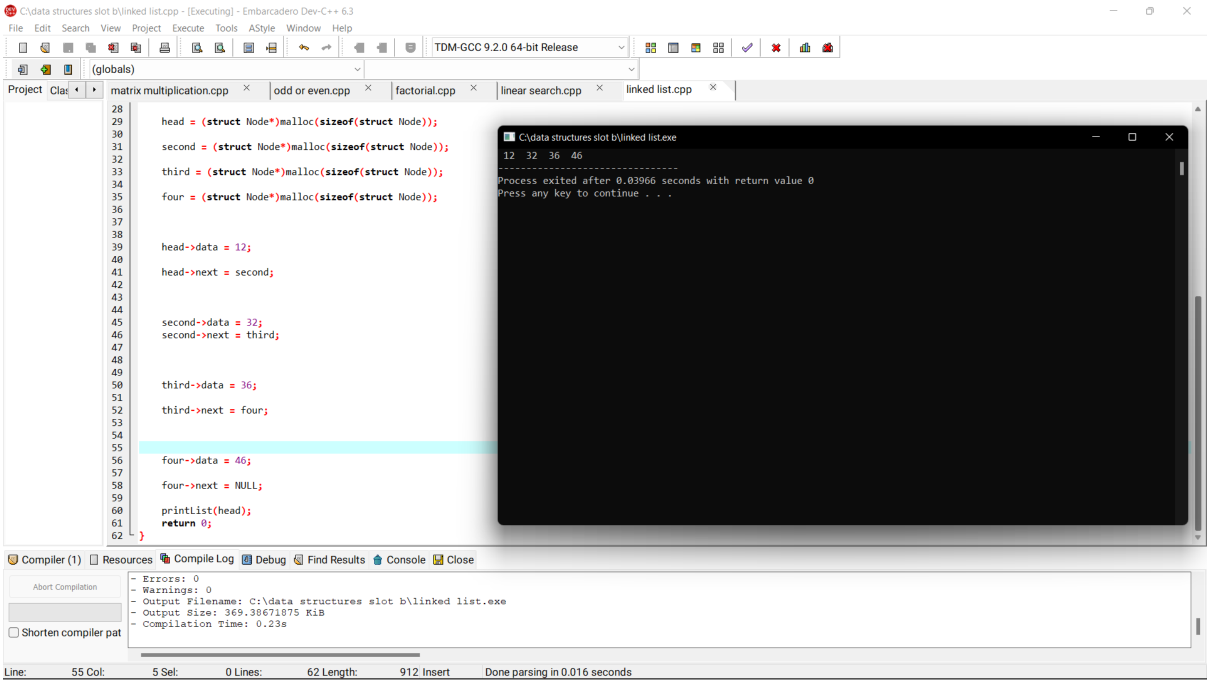
C:\data structures slot b\linear search.exe

```
enter the number of elements in array :7
enter the  elements in array :12
enter the  elements in array :14
enter the  elements in array :17
enter the  elements in array :14
enter the  elements in array :19
enter the  elements in array :34
enter the  elements in array :32
enter the search element :14
2 position
--------------------------------
Process exited after 20.52 seconds with return value 0
Press any key to continue . . .
```

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\data structures slot b\linear search.exe
- Output Size: 353.0205078125 KiB
- Compilation Time: 0.22s
```

Line: 1 Col: 1 Sel: 0 Lines: 26 Length: 408 Insert Done parsing in 0 seconds

Linked list



C:\data structures slot b\linked list.cpp - [Executing] - Embarcadero Dev-C++ 6.3

```c

    head = (struct Node*)malloc(sizeof(struct Node));

    second = (struct Node*)malloc(sizeof(struct Node));

    third = (struct Node*)malloc(sizeof(struct Node));

    four = (struct Node*)malloc(sizeof(struct Node));



    head->data = 12;

    head->next = second;



    second->data = 32;
    second->next = third;



    third->data = 36;

    third->next = four;



    four->data = 46;

    four->next = NULL;

    printList(head);
    return 0;
}
```

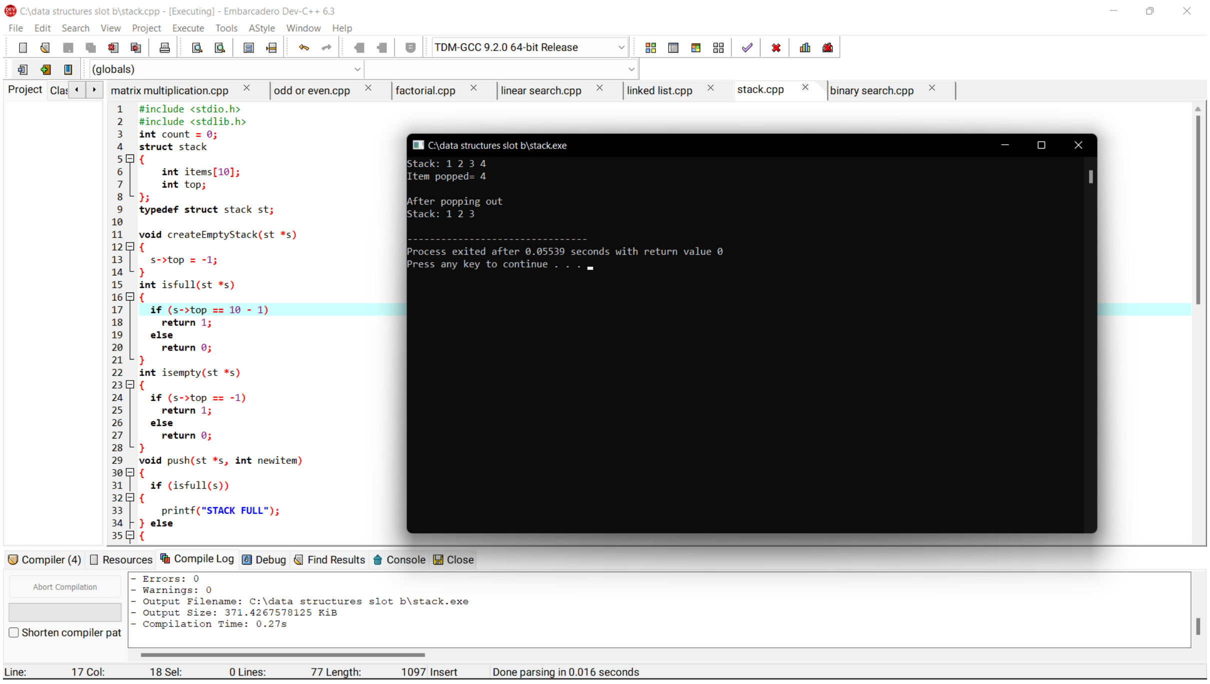
C:\data structures slot b\linked list.exe

```
12  32  36  46
--------------------------------
Process exited after 0.03966 seconds with return value 0
Press any key to continue . . .
```

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\data structures slot b\linked list.exe
- Output Size: 369.38671875 KiB
- Compilation Time: 0.23s
```

Line: 55 Col: 5 Sel: 0 Lines: 62 Length: 912 Insert Done parsing in 0.016 seconds

Stack



C:\data structures slot b\stack.cpp - [Executing] - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
(globals)
Project Clas
matrix multiplication.cpp
odd or even.cpp
factorial.cpp
linear search.cpp
linked list.cpp
stack.cpp
binary search.cpp
C:\data structures slot b\stack.exe
Compiler (4)
Resources
Compile Log
Debug
Find Results
Console
Close
Abort Compilation
□ Shorten compiler pat

```c
#include <stdio.h>
#include <stdlib.h>
int count = 0;
struct stack
{
    int items[10];
    int top;
};
typedef struct stack st;

void createEmptyStack(st *s)
{
  s->top = -1;
}
int isfull(st *s)
{
  if (s->top == 10 - 1)
    return 1;
  else
    return 0;
}
int isempty(st *s)
{
  if (s->top == -1)
    return 1;
  else
    return 0;
}
void push(st *s, int newitem)
{
  if (isfull(s))
{
    printf("STACK FULL");
} else
{
```

```
Stack: 1 2 3 4
Item popped= 4

After popping out
Stack: 1 2 3

--------------------------------
Process exited after 0.05539 seconds with return value 0
Press any key to continue . . .
```

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\data structures slot b\stack.exe
- Output Size: 371.4267578125 KiB
- Compilation Time: 0.27s
```

Line: 17 Col: 18 Sel: 0 Lines: 77 Length: 1097 Insert Done parsing in 0.016 seconds