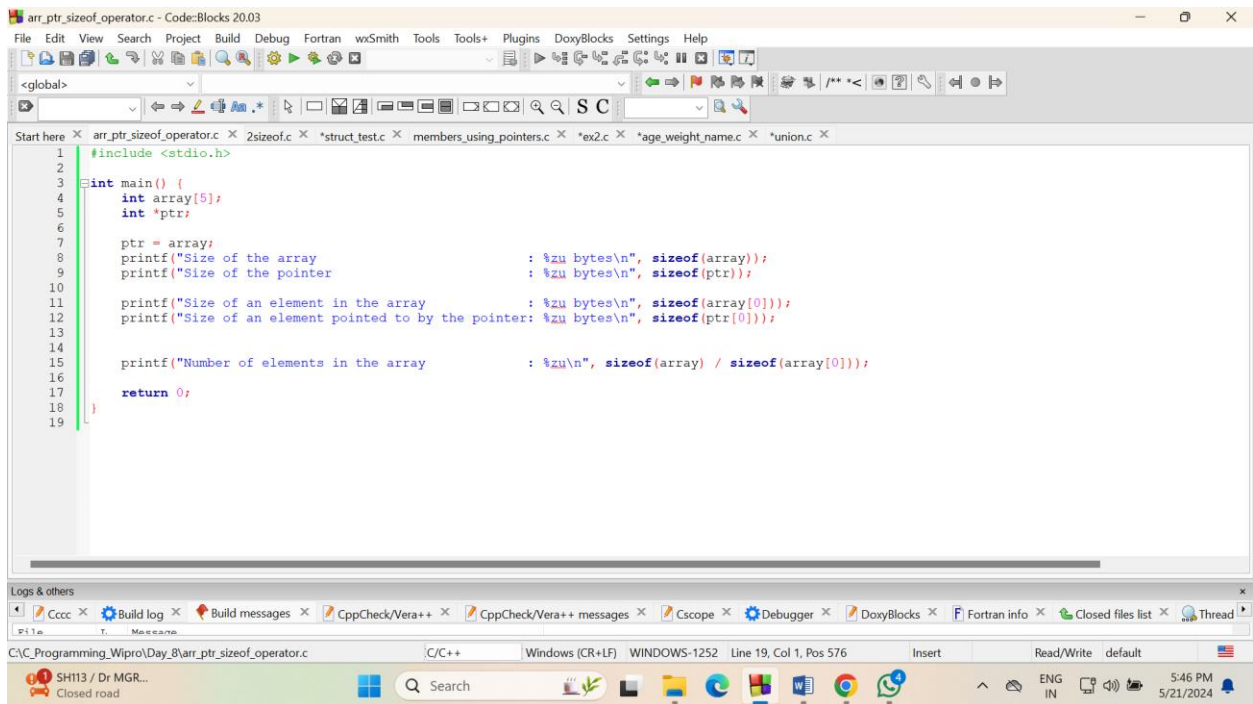


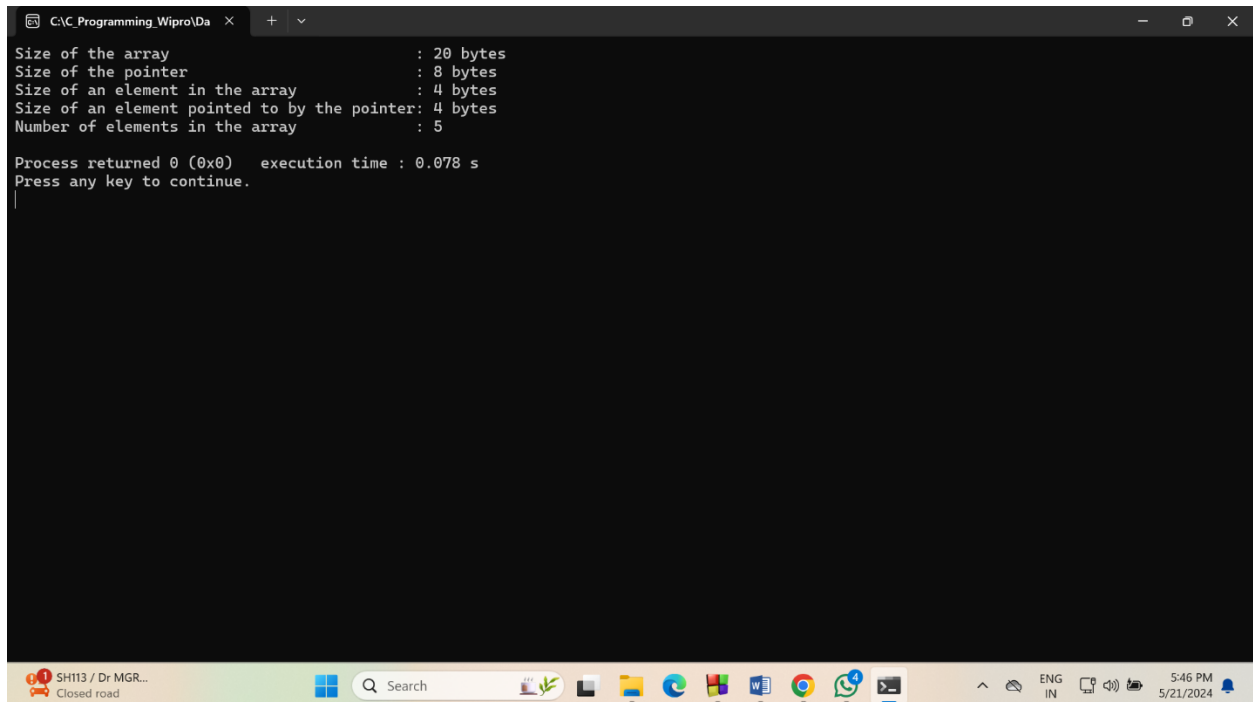
Day 8 C Program

Size of operators:



```
1 #include <stdio.h>
2
3 int main() {
4     int array[5];
5     int *ptr;
6
7     ptr = array;
8     printf("Size of the array : %zu bytes\n", sizeof(array));
9     printf("Size of the pointer : %zu bytes\n", sizeof(ptr));
10
11     printf("Size of an element in the array : %zu bytes\n", sizeof(array[0]));
12     printf("Size of an element pointed to by the pointer: %zu bytes\n", sizeof(ptr[0]));
13
14     printf("Number of elements in the array : %zu\n", sizeof(array) / sizeof(array[0]));
15
16     return 0;
17 }
18
19
```

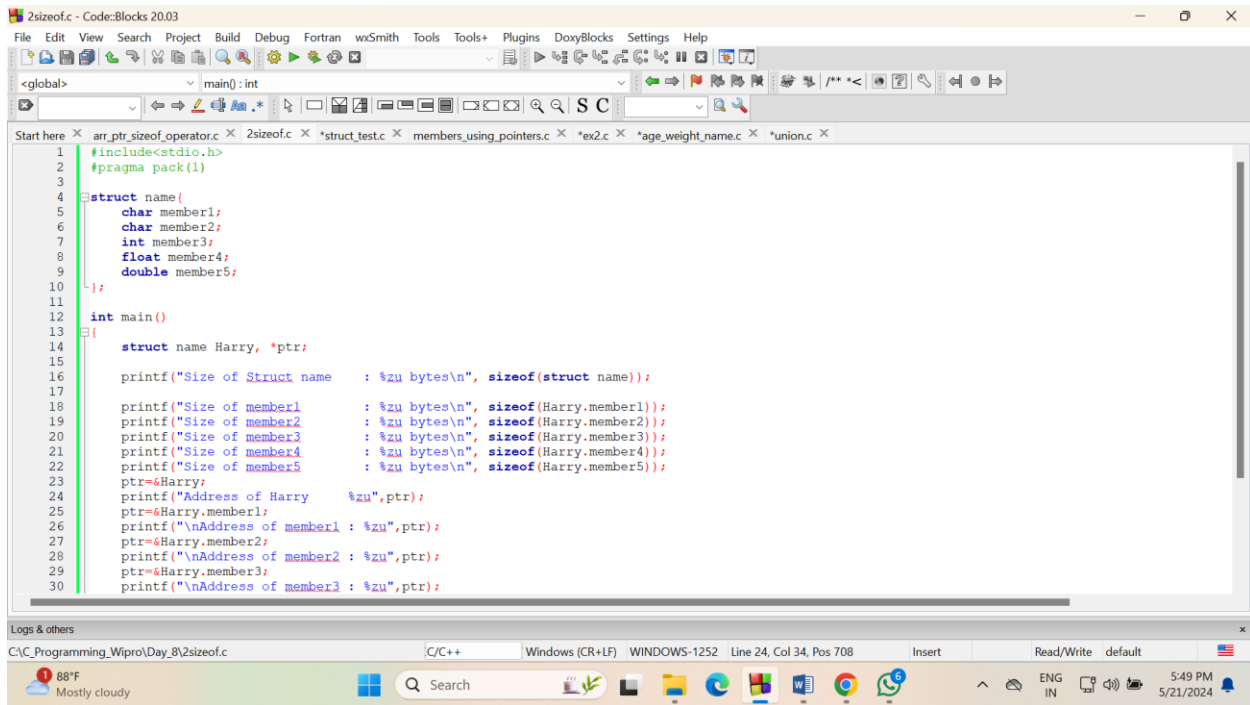
Output:



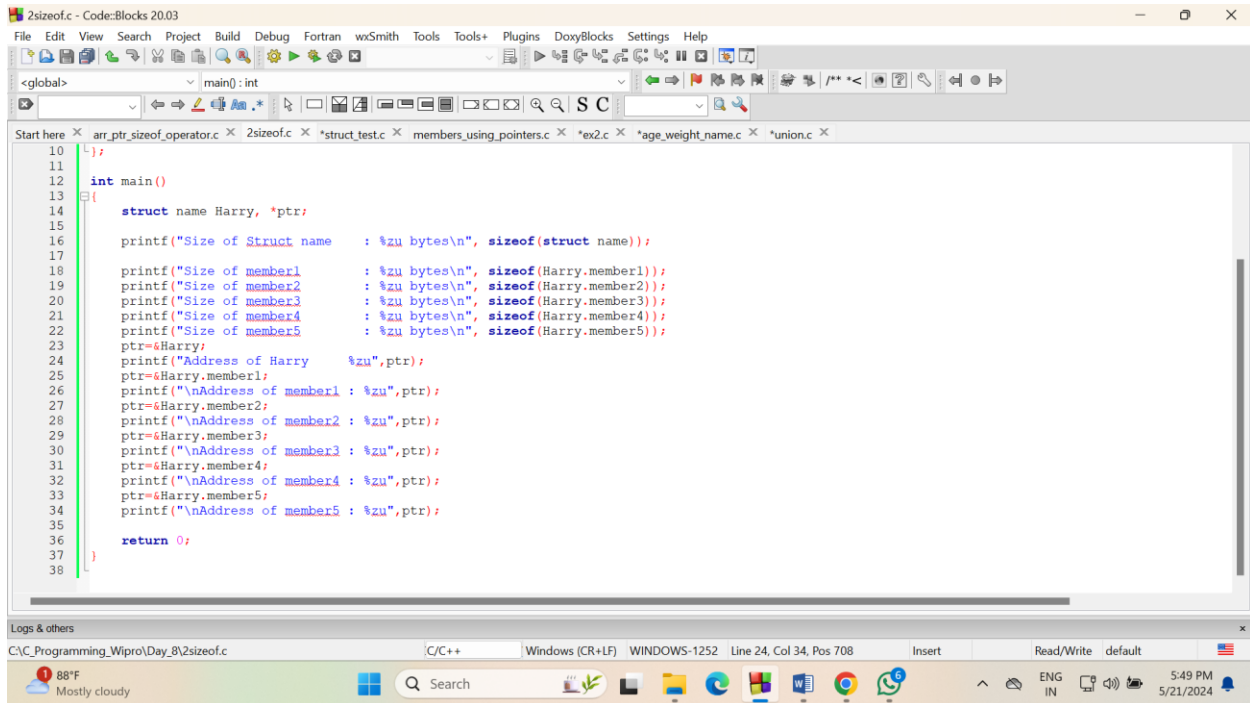
```
C:\C_Programming_Wipro\Day_8\arr_ptr_sizeof_operator.c
Size of the array : 20 bytes
Size of the pointer : 8 bytes
Size of an element in the array : 4 bytes
Size of an element pointed to by the pointer: 4 bytes
Number of elements in the array : 5

Process returned 0 (0x0) execution time : 0.078 s
Press any key to continue.
```

Struct padding:



```
1 #include<stdio.h>
2 #pragma pack(1)
3
4 struct name{
5     char member1;
6     char member2;
7     int member3;
8     float member4;
9     double member5;
10 };
11
12 int main()
13 {
14     struct name Harry, *ptr;
15
16     printf("Size of Struct name : %zu bytes\n", sizeof(struct name));
17
18     printf("Size of member1 : %zu bytes\n", sizeof(Harry.member1));
19     printf("Size of member2 : %zu bytes\n", sizeof(Harry.member2));
20     printf("Size of member3 : %zu bytes\n", sizeof(Harry.member3));
21     printf("Size of member4 : %zu bytes\n", sizeof(Harry.member4));
22     printf("Size of member5 : %zu bytes\n", sizeof(Harry.member5));
23
24     ptr=&Harry;
25     printf("Address of Harry : %zu", ptr);
26     ptr=&Harry.member1;
27     printf("\nAddress of member1 : %zu", ptr);
28     ptr=&Harry.member2;
29     printf("\nAddress of member2 : %zu", ptr);
30     ptr=&Harry.member3;
31     printf("\nAddress of member3 : %zu", ptr);
32 }
```



```
10 };
11
12 int main()
13 {
14     struct name Harry, *ptr;
15
16     printf("Size of Struct name : %zu bytes\n", sizeof(struct name));
17
18     printf("Size of member1 : %zu bytes\n", sizeof(Harry.member1));
19     printf("Size of member2 : %zu bytes\n", sizeof(Harry.member2));
20     printf("Size of member3 : %zu bytes\n", sizeof(Harry.member3));
21     printf("Size of member4 : %zu bytes\n", sizeof(Harry.member4));
22     printf("Size of member5 : %zu bytes\n", sizeof(Harry.member5));
23
24     ptr=&Harry;
25     printf("Address of Harry : %zu", ptr);
26     ptr=&Harry.member1;
27     printf("\nAddress of member1 : %zu", ptr);
28     ptr=&Harry.member2;
29     printf("\nAddress of member2 : %zu", ptr);
30     ptr=&Harry.member3;
31     printf("\nAddress of member3 : %zu", ptr);
32     ptr=&Harry.member4;
33     printf("\nAddress of member4 : %zu", ptr);
34     ptr=&Harry.member5;
35     printf("\nAddress of member5 : %zu", ptr);
36
37     return 0;
38 }
```

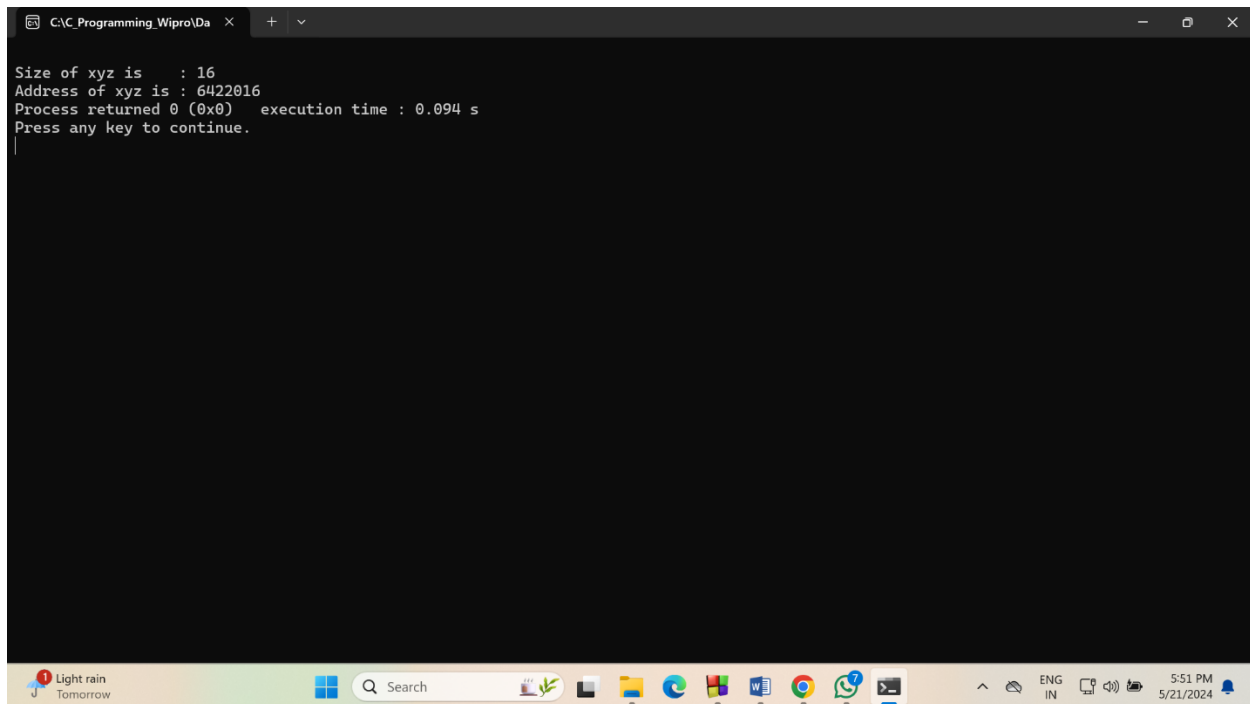
Output:

```
C:\C_Programming_Wipro\Da x + v
Size of Struct name : 18 bytes
Size of member1 : 1 bytes
Size of member2 : 1 bytes
Size of member3 : 4 bytes
Size of member4 : 4 bytes
Size of member5 : 8 bytes
Address of Harry : 6422016
Address of member1 : 6422016
Address of member2 : 6422017
Address of member3 : 6422018
Address of member4 : 6422022
Address of member5 : 6422026
Process returned 0 (0x0) execution time : 0.094 s
Press any key to continue.
```

Size of struct:

```
*struct_test.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
<global>
Start here x arr_ptr_sizeof_operator.c x 2sizeof.c x *struct_test.c x members_using_pointers.c x *ex2.c x *age_weight_name.c x *union.c x
1 #include <stdio.h>
2 // #pragma pack(1)
3
4 int main()
5 {
6     struct test{
7         double x;
8         char y;
9         int z;
10    };
11    struct test *ptr, xyz;
12    printf("\nSize of xyz is : %zu", sizeof(xyz));
13    ptr=&xyz;
14    printf("\nAddress of xyz is : %zu", ptr);
15    return 0;
16 }
17
```

Output:

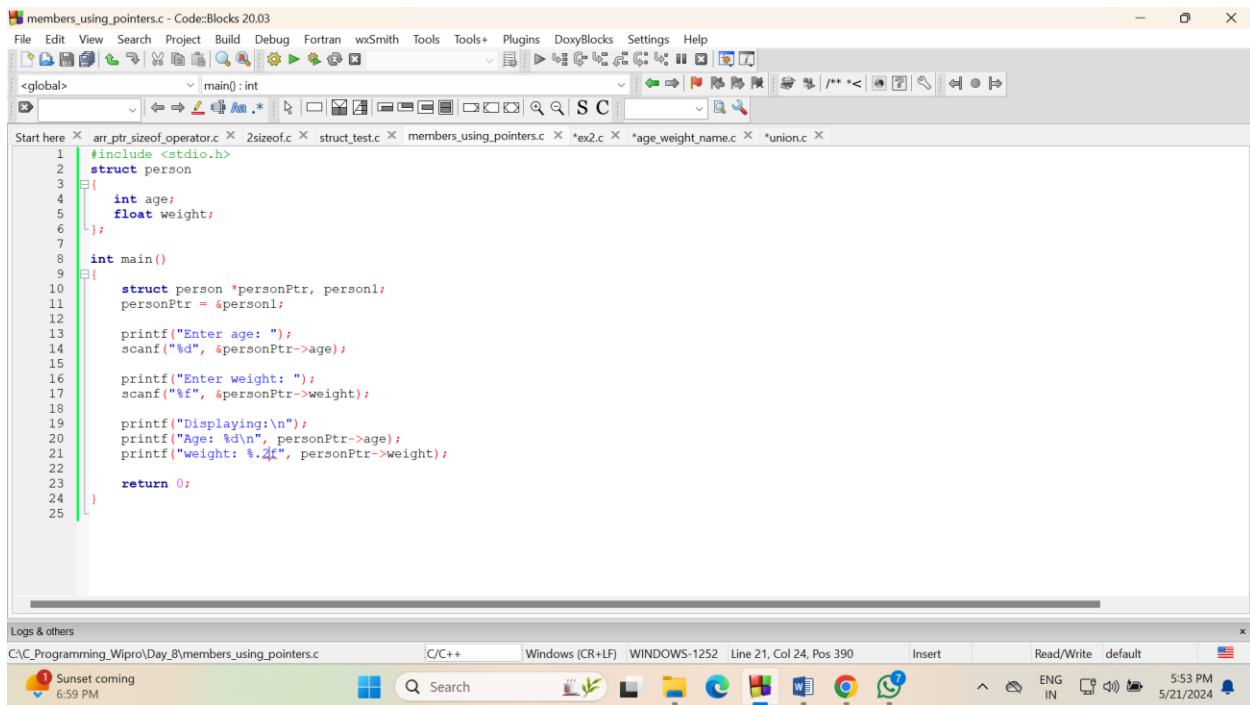


A screenshot of a Windows command prompt window. The title bar shows the file path 'C:\C_Programming_Wipro\Da'. The output text is as follows:

```
Size of xyz is      : 16
Address of xyz is : 6422016
Process returned 0 (0x0)   execution time : 0.094 s
Press any key to continue.
```

The window is running on a Windows 10 desktop. The taskbar at the bottom shows the Start button, a search bar, and several application icons. The system tray on the right indicates 'Light rain Tomorrow', 'ENG IN', and the date '5/21/2024'.

Using StructDisplaying age and weight



A screenshot of the Code::Blocks IDE showing a C program. The title bar indicates the file is 'members_using_pointers.c'. The menu bar includes File, Edit, View, Search, Project, Build, Debug, Fortran, wxSmith, Tools, Tools+, Plugins, DoxyBlocks, Settings, and Help. The toolbar contains various icons for file operations, editing, and running. The main editor window shows the following code:

```
1 #include <stdio.h>
2
3 struct person
4 {
5     int age;
6     float weight;
7 };
8
9 int main()
10 {
11     struct person *personPtr, person1;
12     personPtr = &person1;
13     printf("Enter age: ");
14     scanf("%d", &personPtr->age);
15
16     printf("Enter weight: ");
17     scanf("%f", &personPtr->weight);
18
19     printf("Displaying:\n");
20     printf("Age: %d\n", personPtr->age);
21     printf("weight: %.2f", personPtr->weight);
22
23     return 0;
24 }
25
```

The status bar at the bottom shows the file path 'C:\C_Programming_Wipro\Day_8\members_using_pointers.c', the language 'C/C++', and the current cursor position 'Line 21, Col 24, Pos 390'. The system tray on the right shows 'Sunset coming 6:59 PM', 'ENG IN', and the date '5/21/2024'.

Output:

```
C:\C_Programming_Wipro\Da x + v
Enter age: 21
Enter weight: 57
Displaying:
Age: 21
weight: 57.00
Process returned 0 (0x0)   execution time : 12.866 s
Press any key to continue.
```

USA - BAN
In 3 hours

Search

ENG
IN

5:53 PM
5/21/2024

Using pragma print the bytes:

```
*ex2.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
<global> main():int
Start here x arr_ptr_sizeof_operator.c x 2sizeof.c x struct_test.c x members_using_pointers.c x *ex2.c x *age_weight_name.c x *union.c x
1 #include <stdio.h>
2 #pragma pack(1)
3 struct student {
4     char name[50];
5     int age;
6 };
7
8 void display(struct student s);
9
10 int main() {
11     struct student s1;
12     printf("\nSize of s1 is %zu\n", sizeof(s1));
13     printf("\nSize of name is %zu", sizeof(s1.name));
14     printf("\nEnter name: ");
15     //fgets(s1.name, 50, stdin);
16
17     scanf("%[^\n]%*c", s1.name);
18     //gets(s1.name);
19
20     //printf("Size of name %zu\n", sizeof(s1));
21     printf("Enter age: ");
22     scanf("%d", &s1.age);
23
24     display(s1);
25
26     return 0;
27 }
28
29
30 void display(struct student s) {
```

Logs & others

C:\C_Programming_Wipro\Day_8\ex2.c C/C++ Windows (CR+LF) WINDOWS-1252 Line 25, Col 17, Pos 505 Insert Modified Read/Write default

88°F
Mostly cloudy

Search

ENG
IN

5:55 PM
5/21/2024