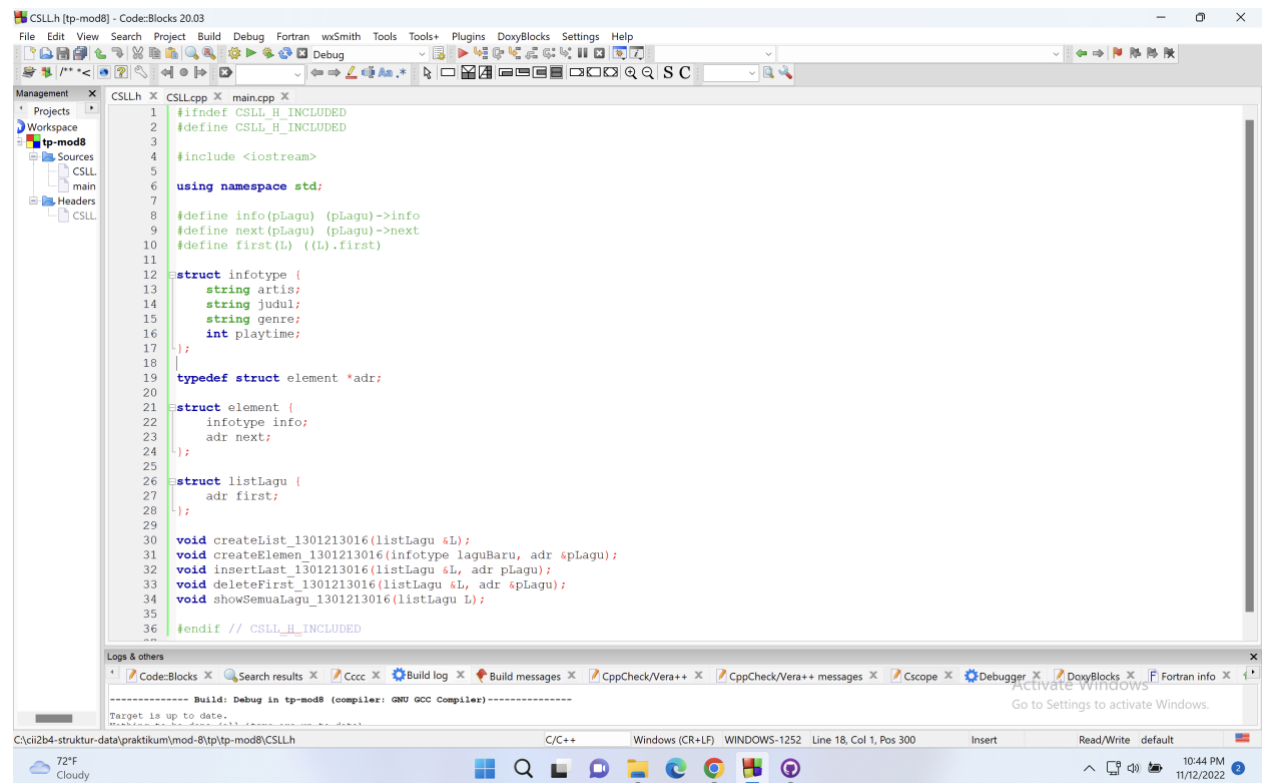


Nama : Fawaz Al Rasyid

NIM : 1301213016

## CSLL.h



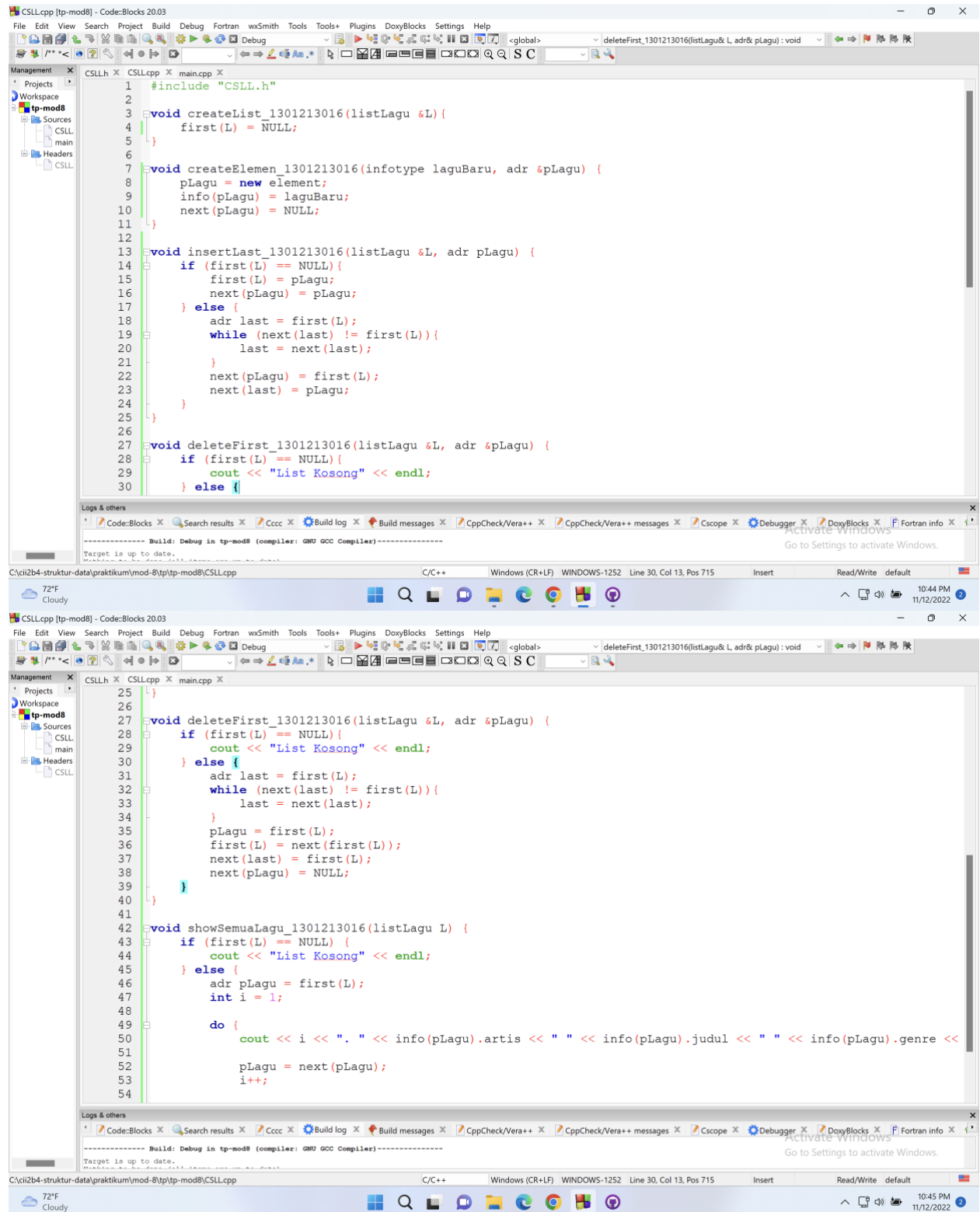
```
1  #ifndef CSLL_H_INCLUDED
2  #define CSLL_H_INCLUDED
3
4  #include <iostream>
5
6  using namespace std;
7
8  #define info(pLagu) (pLagu->info)
9  #define next(pLagu) (pLagu->next)
10 #define first(L) ((L).first)
11
12 struct infotype {
13     string artis;
14     string judul;
15     string genre;
16     int playtime;
17 };
18
19 typedef struct element *adr;
20
21 struct element {
22     infotype info;
23     adr next;
24 };
25
26 struct listLagu {
27     adr first;
28 };
29
30 void createList_1301213016(listLagu &L);
31 void createElemen_1301213016(infotype laguBaru, adr &pLagu);
32 void insertLast_1301213016(listLagu &L, adr pLagu);
33 void deleteFirst_1301213016(listLagu &L, adr &pLagu);
34 void showSemuaLagu_1301213016(listLagu L);
35
36 #endif // CSLL_H_INCLUDED
```

Build: Debug in tp-mod8 (compiler: GNU GCC Compiler)  
Target is up to date.

C:\cii2b4-struktur-data\praktikum\mod-8\tp\tp-mod8\CSLL.h C/C++ Windows (CR+LF) WINDOWS-1252 Line 18, Col 1, Pos 300 Insert Read/Write default

72°F Cloudy 10:44 PM 11/12/2022

## CSLL.cpp



```
1 #include "CSLL.h"
2
3 void createList_1301213016(listLagu &L) {
4     first(L) = NULL;
5 }
6
7 void createElemen_1301213016(infotype laguBaru, adr &pLagu) {
8     pLagu = new element;
9     info(pLagu) = laguBaru;
10    next(pLagu) = NULL;
11 }
12
13 void insertLast_1301213016(listLagu &L, adr pLagu) {
14     if (first(L) == NULL) {
15         first(L) = pLagu;
16         next(pLagu) = pLagu;
17     } else {
18         adr last = first(L);
19         while (next(last) != first(L)) {
20             last = next(last);
21         }
22         next(pLagu) = first(L);
23         next(last) = pLagu;
24     }
25 }
26
27 void deleteFirst_1301213016(listLagu &L, adr &pLagu) {
28     if (first(L) == NULL) {
29         cout << "List Kosong" << endl;
30     } else {
31         adr last = first(L);
32         while (next(last) != first(L)) {
33             last = next(last);
34         }
35         pLagu = first(L);
36         first(L) = next(first(L));
37         next(last) = first(L);
38         next(pLagu) = NULL;
39     }
40 }
41
42 void showSemuaLagu_1301213016(listLagu L) {
43     if (first(L) == NULL) {
44         cout << "List Kosong" << endl;
45     } else {
46         adr pLagu = first(L);
47         int i = 1;
48         do {
49             cout << i << ". " << info(pLagu).artis << " " << info(pLagu).judul << " " << info(pLagu).genre <<
50             pLagu = next(pLagu);
51             i++;
52         } while (pLagu != first(L));
53     }
54 }
```

The screenshot shows a C++ IDE with the file `CSLL.cpp` open. The code implements a function `showSemuaLagu_1301213016` that traverses a linked list. The list structure is defined in `CSLL.h` (visible in the left sidebar). The function starts by checking if the list is empty (`first(L) == NULL`). If not, it prints the details of each node (index, artist, title, genre, and playtime) and moves to the next node until it reaches the end (`NULL`).

```
31     adr last = first(L);
32     while (next(last) != first(L)) {
33         last = next(last);
34     }
35     pLagu = first(L);
36     first(L) = next(first(L));
37     next(last) = first(L);
38     next(pLagu) = NULL;
39 }
40
41
42 void showSemuaLagu_1301213016(listLagu L) {
43     if (first(L) == NULL) {
44         cout << "List Kosong" << endl;
45     } else {
46         adr pLagu = first(L);
47         int i = 1;
48
49         do {
50             cout << i << ". " << info(pLagu).artis << " " << info(pLagu).judul << " " << info(pLagu).genre <<
51             pLagu = next(pLagu);
52             i++;
53         } while (pLagu != first(L));
54
55         cout << endl;
56     }
57 }
58
59
60
```

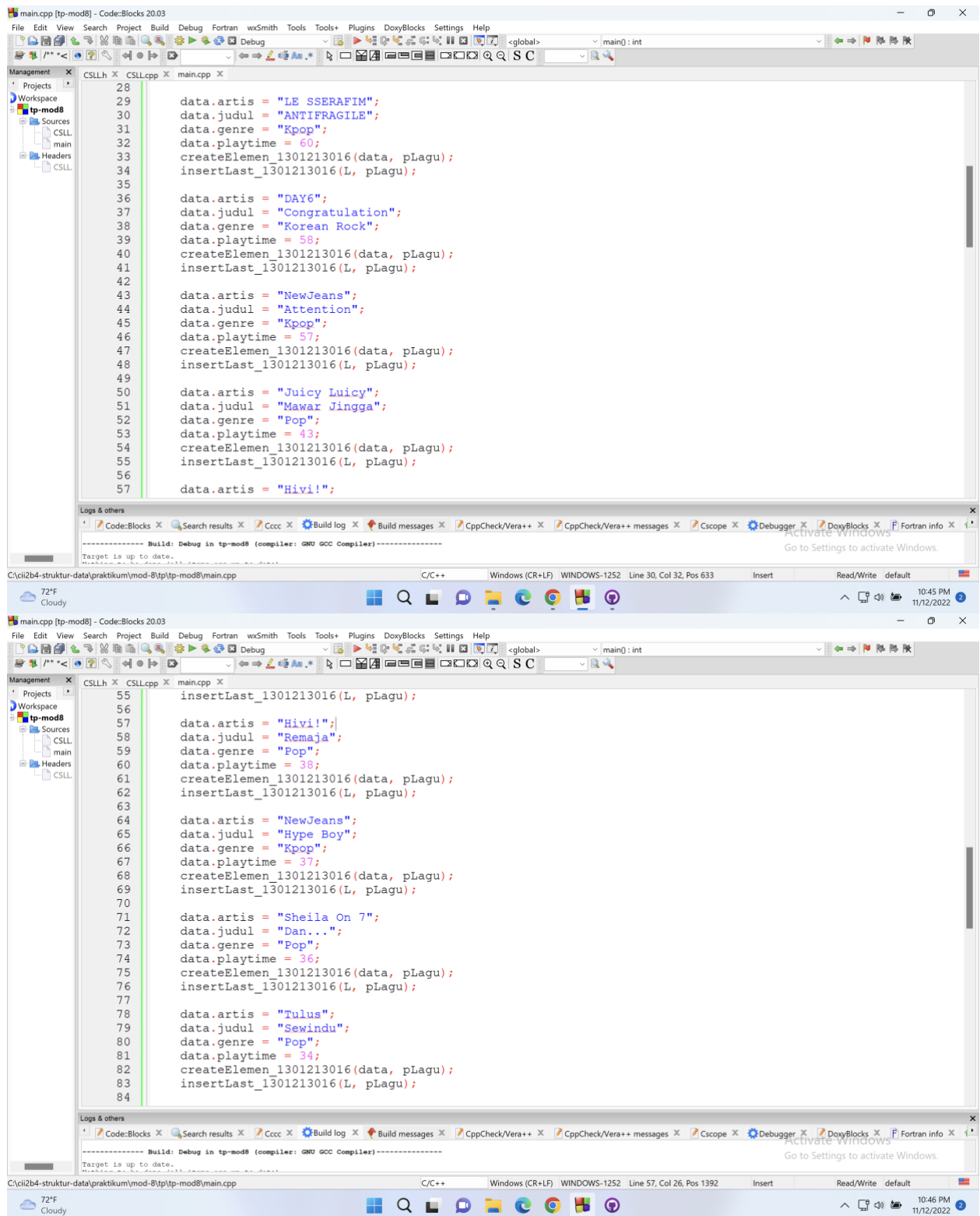
The status bar at the bottom indicates the file is `C:\ici2b4-struktur-data\praktikum\mod-8\tp-mod8\CSLL.cpp`, line 53, column 17, position 1362. The system tray shows the date as 11/12/2022 and time as 10:45 PM.

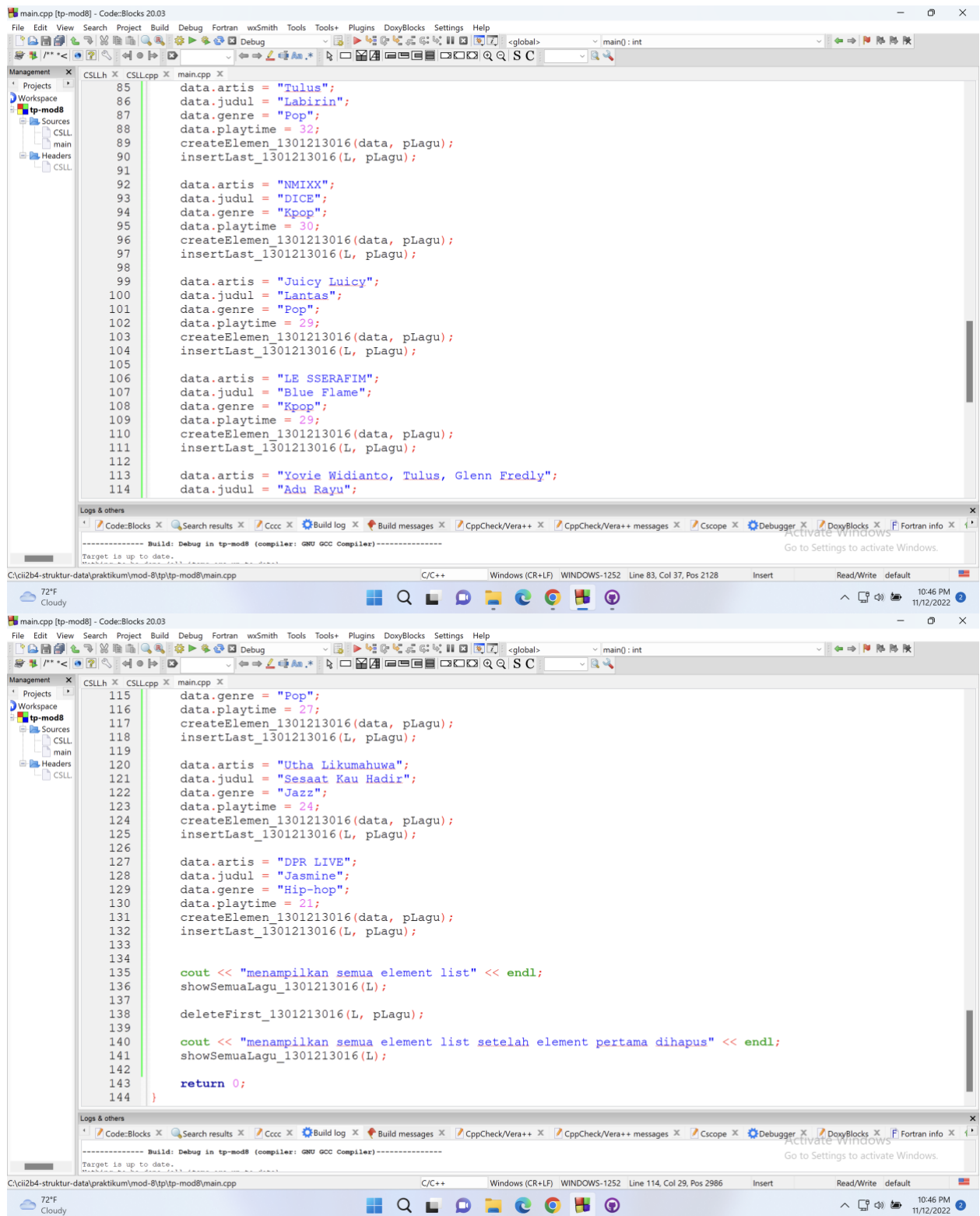
## Main.cpp

The screenshot shows the `main.cpp` file in the same IDE. It includes the `CSLL.h` header and the `iostream` library. The `main` function initializes a linked list with three nodes. Each node contains an artist name, a title, a genre, and a playtime. The nodes are created using `createElemen_1301213016` and inserted into the list using `insertLast_1301213016`. Finally, the list is traversed and displayed using `showSemuaLagu_1301213016`.

```
1 #include "CSLL.h"
2 #include <iostream>
3
4 using namespace std;
5
6 int main()
7 {
8     listLagu L;
9     adr pLagu;
10
11     createList_1301213016(L);
12
13     infotype data;
14
15     data.artis = "LE SSERAFIM";
16     data.judul = "Good Parst";
17     data.genre = "Kpop";
18     data.playtime = 78;
19     createElemen_1301213016(data, pLagu);
20     insertLast_1301213016(L, pLagu);
21
22     data.artis = "The Weekend";
23     data.judul = "After Hours";
24     data.genre = "Pop";
25     data.playtime = 61;
26     createElemen_1301213016(data, pLagu);
27     insertLast_1301213016(L, pLagu);
28
29     data.artis = "LE SSERAFIM";
30     data.judul = "ANTIFRAGILE";
31 }
```

The status bar at the bottom indicates the file is `C:\ici2b4-struktur-data\praktikum\mod-8\tp-mod8\main.cpp`, line 87, column 24, position 2211. The system tray shows the date as 11/12/2022 and time as 10:45 PM.





## Output

```
C:\cizb4-struktur-data\praktikum\mod-8\tp\tp-mod8\bin\Debug\tp-mod8.exe
1. LE SSERAFIM Good Parst Kpop 78
2. The Weekend After Hours Pop 61
3. LE SSERAFIM ANTIFRAGILE Kpop 60
4. DAY6 Congratulation Korean Rock 58
5. NewJeans Attention Kpop 57
6. Juicy Luicy Mawar Jingga Pop 43
7. Hivi! Remaja Pop 38
8. NewJeans Hype Boy Kpop 37
9. Sheila On 7 Dan... Pop 36
10. Tulus Sewindu Pop 34
11. Tulus Labirin Pop 32
12. NMIXX DICE Kpop 30
13. Juicy Luicy Lantas Pop 29
14. LE SSERAFIM Blue Flame Kpop 29
15. Vovie Midianto, Tulus, Glenn Fredly Adu Rayu Pop 27
16. Utha Likumahuwa Sesaat Kau Hadir Jazz 24
17. DPR LIVE Jasmine Hip-hop 21

menampilkan semua element list setelah element pertama dihapus
1. The Weekend After Hours Pop 61
2. LE SSERAFIM ANTIFRAGILE Kpop 60
3. DAY6 Congratulation Korean Rock 58
4. NewJeans Attention Kpop 57
5. Juicy Luicy Mawar Jingga Pop 43
6. Hivi! Remaja Pop 38
7. NewJeans Hype Boy Kpop 37
8. Sheila On 7 Dan... Pop 36
9. Tulus Sewindu Pop 34
10. Tulus Labirin Pop 32
11. NMIXX DICE Kpop 30
12. Juicy Luicy Lantas Pop 29
13. LE SSERAFIM Blue Flame Kpop 29
14. Vovie Midianto, Tulus, Glenn Fredly Adu Rayu Pop 27
15. Utha Likumahuwa Sesaat Kau Hadir Jazz 24
16. DPR LIVE Jasmine Hip-hop 21

Process returned 0 (0x0)   execution time : 0.081 s
Press any key to continue.
```

72°F Cloudy

Activate Windows  
Go to Settings to activate Windows.

10:46 PM  
11/12/2022