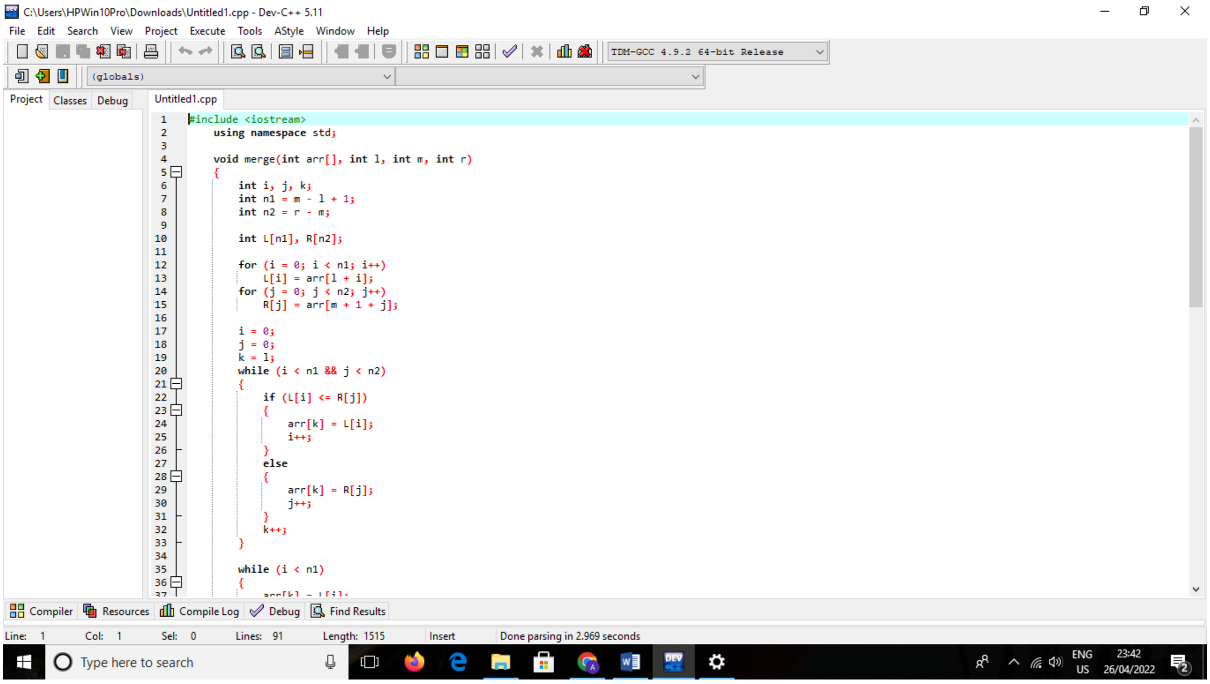
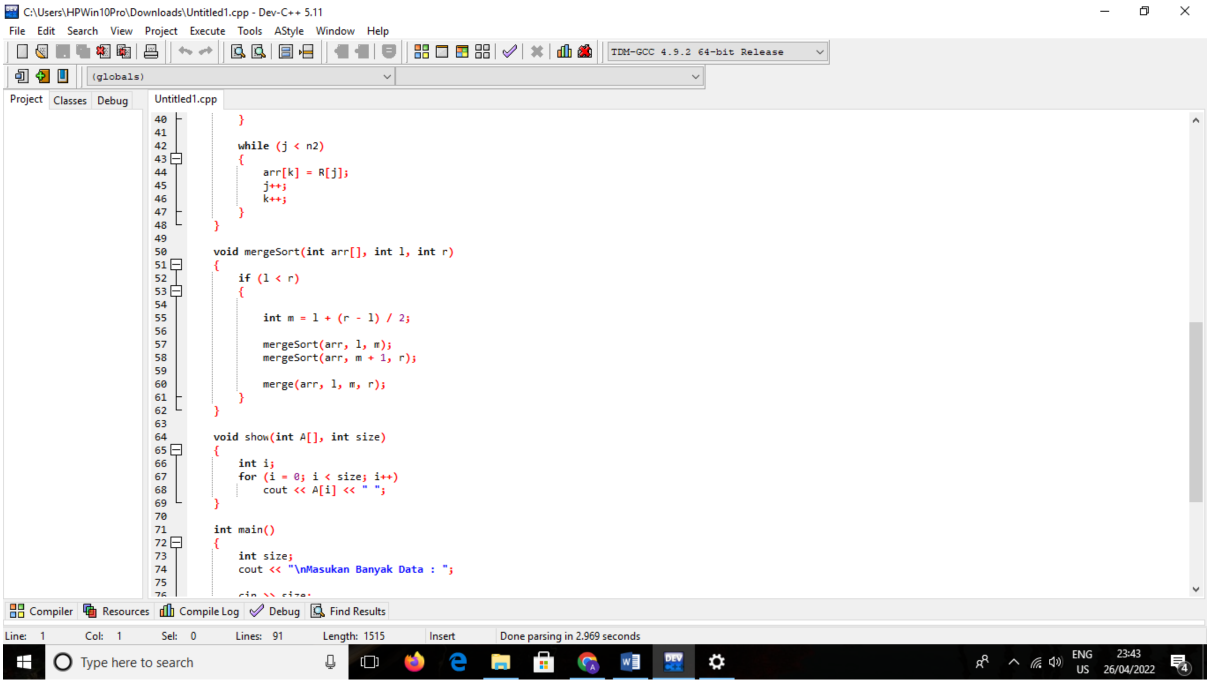
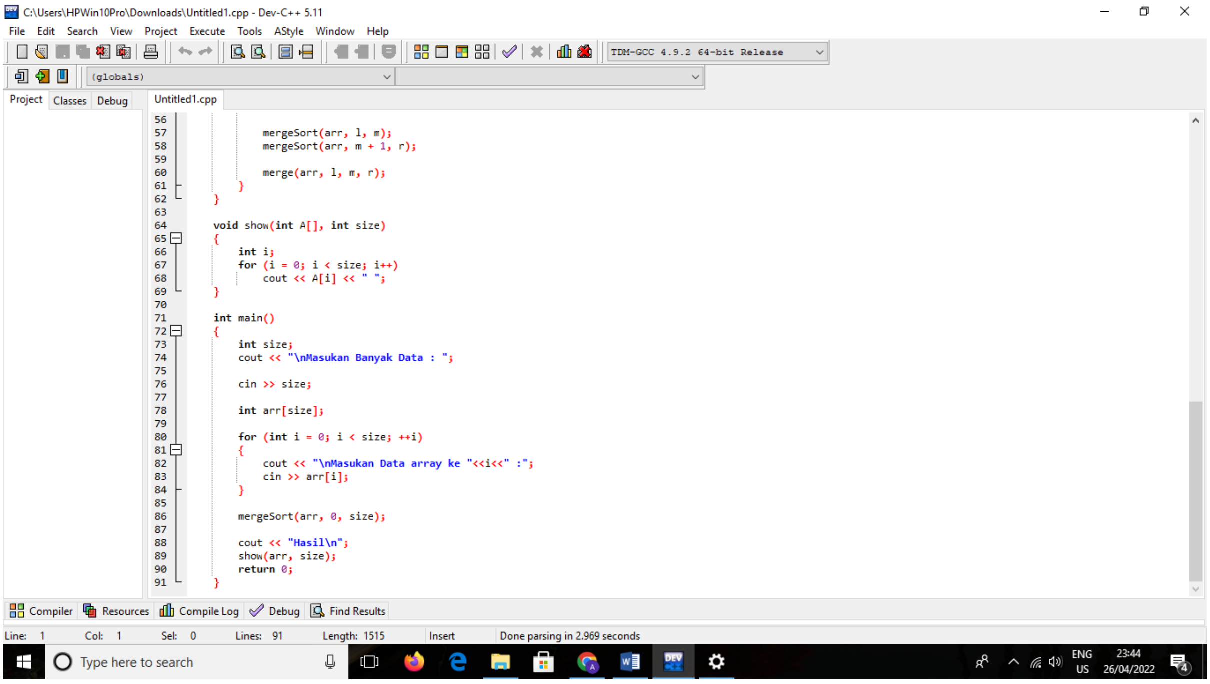

C:\Users\HPWin10Pro\Downloads\Untitled1.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
Untitled1.cpp
Compiler Resources Compile Log Debug Find Results
Line: 1 Col: 1 Sel: 0 Lines: 91 Length: 1515 Insert Done parsing in 2.969 seconds
Type here to search
ENG US 23:42 26/04/2022

```cpp
#include <iostream>
    using namespace std;

    void merge(int arr[], int l, int m, int r)
    {
        int i, j, k;
        int n1 = m - l + 1;
        int n2 = r - m;

        int L[n1], R[n2];

        for (i = 0; i < n1; i++)
            L[i] = arr[l + i];
        for (j = 0; j < n2; j++)
            R[j] = arr[m + 1 + j];

        i = 0;
        j = 0;
        k = l;
        while (i < n1 && j < n2)
        {
            if (L[i] <= R[j])
            {
                arr[k] = L[i];
                i++;
            }
            else
            {
                arr[k] = R[j];
                j++;
            }
            k++;
        }

        while (i < n1)
        {
            arr[k] = L[i];
```

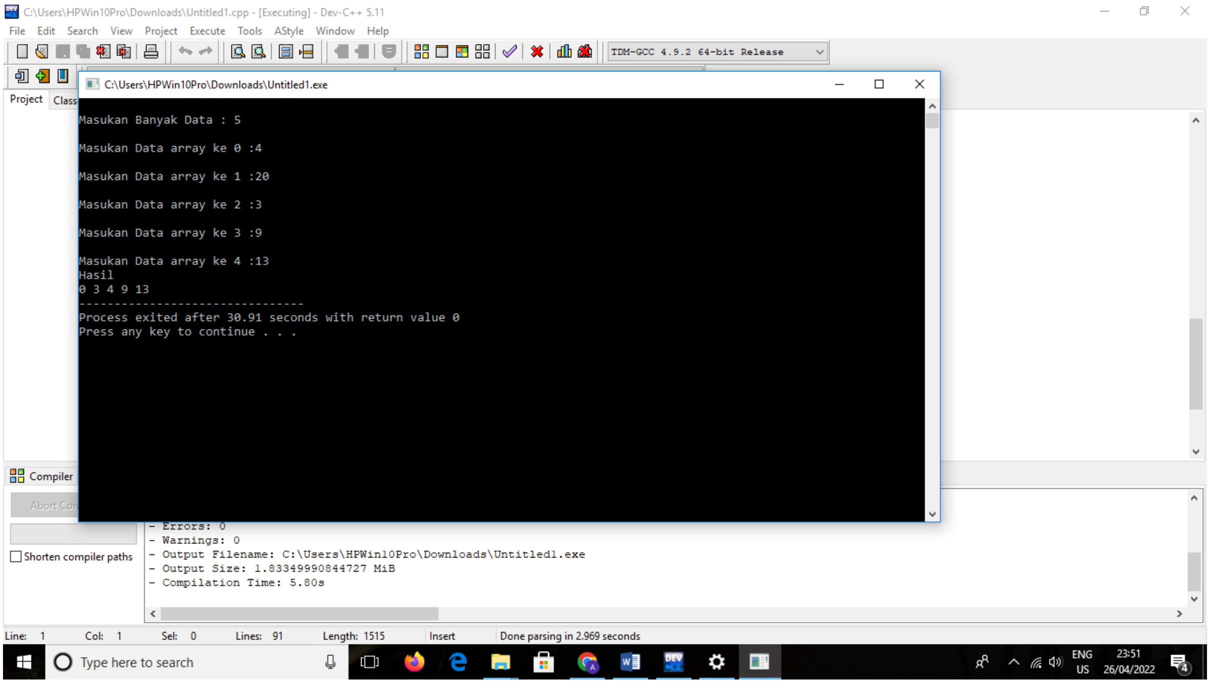

C:\Users\HPWin10Pro\Downloads\Untitled1.cpp - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
Untitled1.cpp
Compiler Resources Compile Log Debug Find Results
Line: 1 Col: 1 Sel: 0 Lines: 91 Length: 1515 Insert Done parsing in 2.969 seconds
Type here to search
ENG US 23:43 26/04/2022

```cpp
        }

        while (j < n2)
        {
            arr[k] = R[j];
            j++;
            k++;
        }
    }

    void mergeSort(int arr[], int l, int r)
    {
        if (l < r)
        {

            int m = l + (r - l) / 2;

            mergeSort(arr, l, m);
            mergeSort(arr, m + 1, r);

            merge(arr, l, m, r);
        }
    }

    void show(int A[], int size)
    {
        int i;
        for (i = 0; i < size; i++)
            cout << A[i] << " ";
    }

    int main()
    {
        int size;
        cout << "\nMasukan Banyak Data : ";

        cin >> size;
```


C:\Users\HPWin10Pro\Downloads\Untitled1.cpp - 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
Untitled1.cpp
Compiler Resources Compile Log Debug Find Results
Type here to search
ENG US 23:44 26/04/2022

```cpp
            mergeSort(arr, l, m);
            mergeSort(arr, m + 1, r);

            merge(arr, l, m, r);
        }
}

void show(int A[], int size)
{
    int i;
    for (i = 0; i < size; i++)
        cout << A[i] << " ";
}

int main()
{
    int size;
    cout << "\nMasukan Banyak Data : ";

    cin >> size;

    int arr[size];

    for (int i = 0; i < size; ++i)
    {
        cout << "\nMasukan Data array ke "<<i<<" :";
        cin >> arr[i];
    }

    mergeSort(arr, 0, size);

    cout << "Hasil\n";
    show(arr, size);
    return 0;
}
```

Line: 1 Col: 1 Sel: 0 Lines: 91 Length: 1515 Insert Done parsing in 2.969 seconds


C:\Users\HPWin10Pro\Downloads\Untitled1.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
Project Class
C:\Users\HPWin10Pro\Downloads\Untitled1.exe
Compiler
Abort Cor
Type here to search
ENG US 23:51 26/04/2022

```
Masukan Banyak Data : 5

Masukan Data array ke 0 :4

Masukan Data array ke 1 :20

Masukan Data array ke 2 :3

Masukan Data array ke 3 :9

Masukan Data array ke 4 :13
Hasil
0 3 4 9 13
--------------------------------
Process exited after 30.91 seconds with return value 0
Press any key to continue . . .
```

☐ Shorten compiler paths

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\HPWin10Pro\Downloads\Untitled1.exe
- Output Size: 1.83349990844727 MiB
- Compilation Time: 5.80s
```

Line: 1 Col: 1 Sel: 0 Lines: 91 Length: 1515 Insert Done parsing in 2.969 seconds

Kelebihan merge sort

Cocok untuk **sorting** akses datanya lambat misalnya tape drive atau hard disk. Cocok untuk **sorting** data yang biasanya diakses secara sequentially (berurutan), misalnya linked list, tape drive, dan hard disk.

Kekurangan merge sort

- **Kekurangan Merge Sort** yaitu terlalu banyak menggunakan ruang pada memori.
- **Merge Sort** membutuhkan lebih banyak ruang daripada jenis **sorting** lainnya.