

TUGAS TEORI KONSEP PEMROGRAMAN

JILID 6



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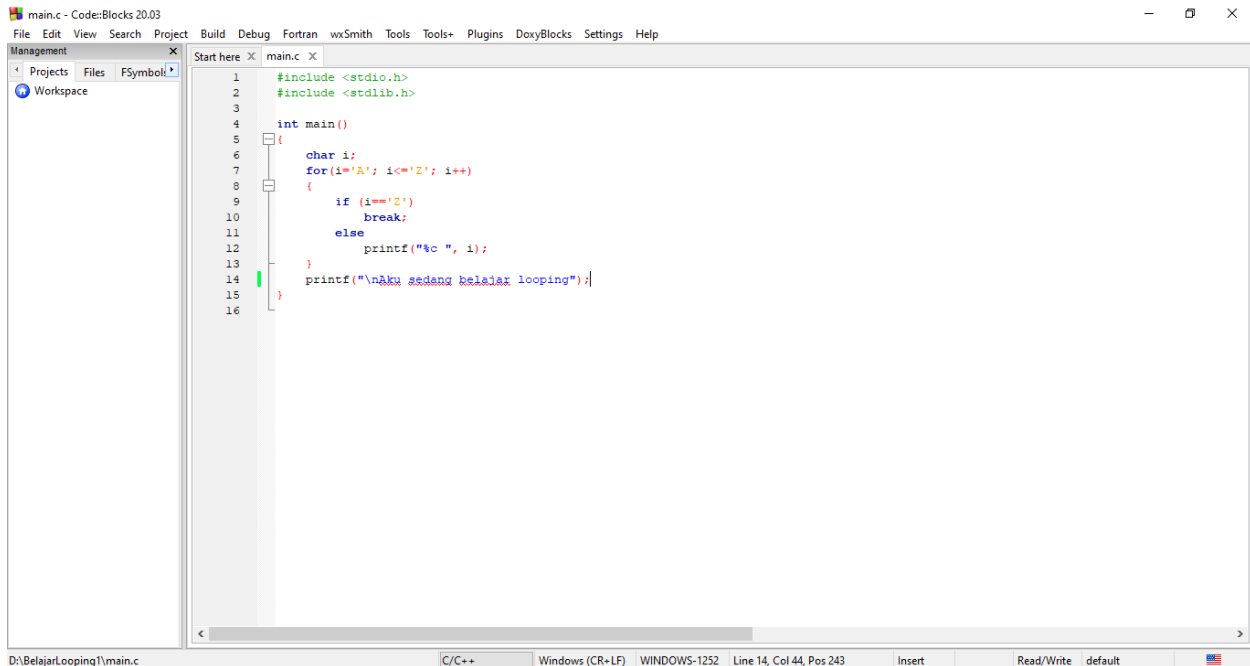
Dosen :

Lusiana Agustien M.Kom

POLITEKNIK ELEKTRONIKA NEGERI SURABAYA

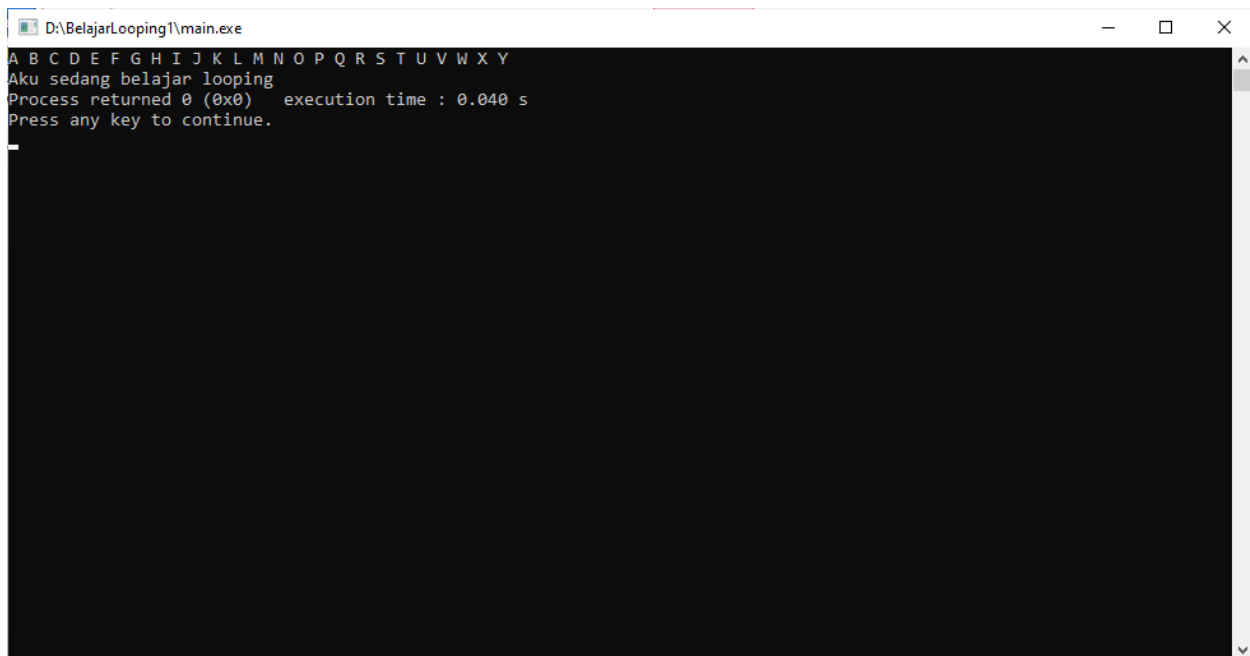
1. Dengan menggunakan pernyataan break, buatlah program yang dapat menampilkan semua tampilan karakter yang diketikkan dan program berakhir ketika ditekan tombol Enter.

Jawab :



```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     char i;
7     for(i='A'; i<='Z'; i++)
8     {
9         if (i=='Z')
10            break;
11        else
12            printf("%c ", i);
13    }
14    printf("\naku sedang belajar looping");
15 }
16
```

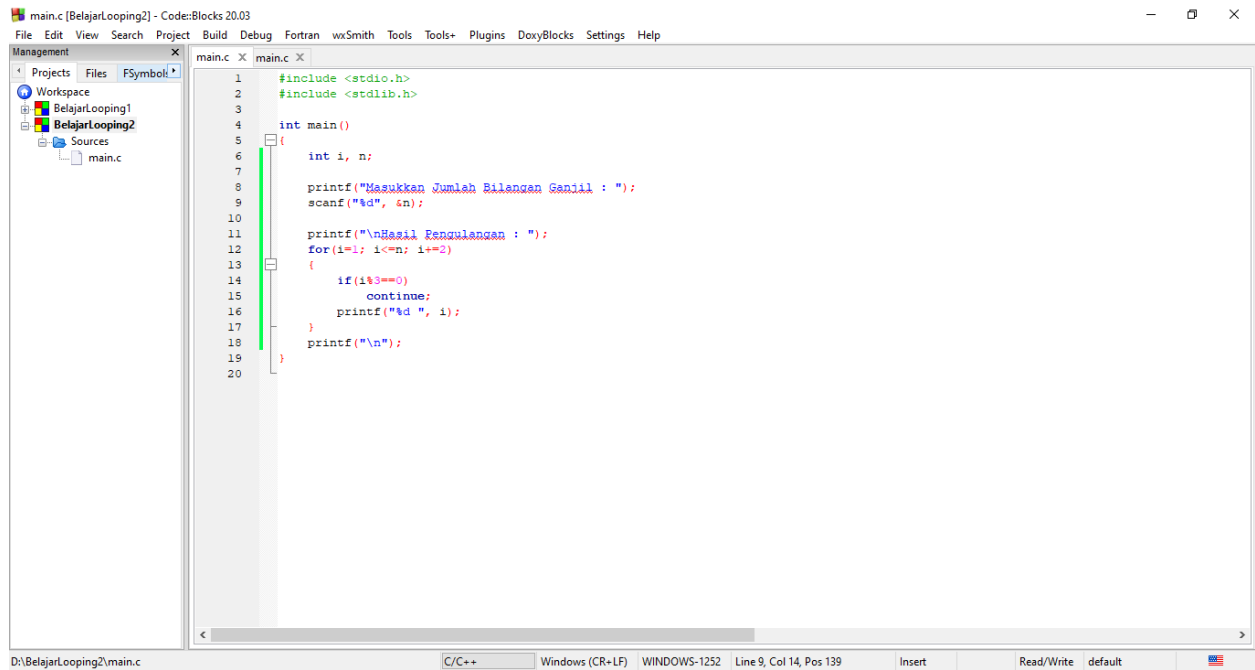
Output :



```
D:\BelajarLooping1\main.exe
A B C D E F G H I J K L M N O P Q R S T U V W X Y
Aku sedang belajar looping
Process returned 0 (0x0)   execution time : 0.040 s
Press any key to continue.
```

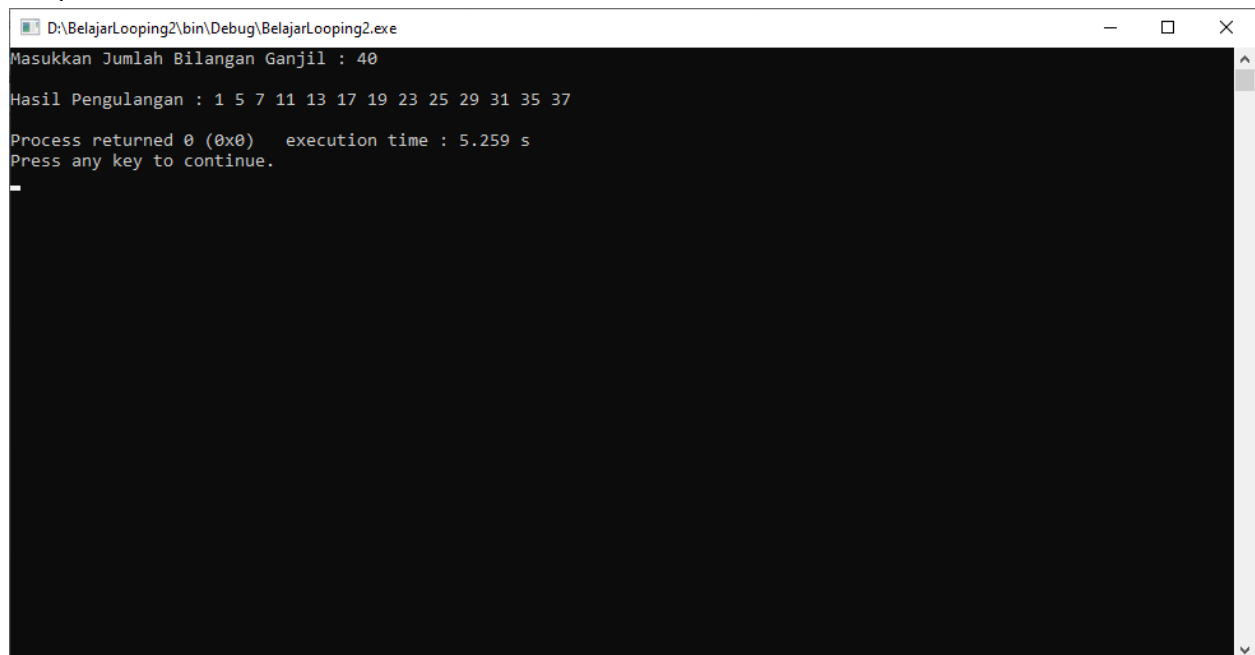
2. Dengan menggunakan pernyataan continue, buatlah program yang dapat menampilkan bilangan ganjil dari 1 sampai < n (n diinputkan), kecuali bilangan ganjil tersebut kelipatan 3.

Jawab :



```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     int i, n;
7
8     printf("Masukkan Jumlah Bilangan Ganjil : ");
9     scanf("%d", &n);
10
11     printf("\nHasil Pengulangan : ");
12     for(i=1; i<=n; i+=2)
13     {
14         if(i%3==0)
15             continue;
16         printf("%d ", i);
17     }
18     printf("\n");
19 }
20
```

Output :



```
D:\BelajarLooping2\bin\Debug\BelajarLooping2.exe
Masukkan Jumlah Bilangan Ganjil : 40
Hasil Pengulangan : 1 5 7 11 13 17 19 23 25 29 31 35 37
Process returned 0 (0x0)   execution time : 5.259 s
Press any key to continue.
```

3. Dengan menggunakan pernyataan break dan continue, buatlah program untuk membuat program dengan input n, dan output, bilangan ganjil kecuali kelipatan 7 dan 11 mulai dari 1 sampai < n atau bilangan tersebut <100

Jawab :

The screenshot shows the Code::Blocks IDE with a project named 'Belajar Looping3'. The main.c file contains the following code:

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     int i, n;
7
8     printf("Masukkan Jumlah Bilangan : ");
9     scanf("%d", &n);
10
11     printf("\nHasil Pengulangan : ");
12     for(i=1; i<=n; i+=2)
13     {
14         if(i>100)
15             break;
16         if(i%7==0 || i%11==0)
17             continue;
18         printf("%d ", i);
19     }
20     printf("\n");
21 }
22
```

The status bar at the bottom indicates the file is 'D:\Belajar Looping3\main.c', the compiler is 'C/C++', the window title is 'Windows (CR+LF)', the encoding is 'WINDOWS-1252', and the cursor is at 'Line 16, Col 21, Pos 274'.

Output :

The screenshot shows a Windows command prompt window titled '"D:\Belajar Looping3\bin\Debug\Belajar Looping3.exe"'. The output of the program is as follows:

```
Masukkan Jumlah Bilangan : 40
Hasil Pengulangan : 1 3 5 9 13 15 17 19 23 25 27 29 31 37 39
Process returned 0 (0x0)   execution time : 2.733 s
Press any key to continue.
```

4. Buatlah program untuk menerima daftar nilai mahasiswa sbb :

- Input : - Jumlah data (n)
- Nilai ke-1 s/d Nilai ke-n

Output :- Nilai minimal

- Nilai maksimal
- Nilai rata-rata (rata-rata = nilai total / jumlah data)

- (Petunjuk : Gunakan loop *for* dan seleksi kondisi dengan *if*)

Jawab :

```

1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main()
5  {
6      int i, n;
7      float nilai, jumlah, max, min, rata;
8
9      printf("=====\tDaftar Nilai Mahasiswa\t=====\n");
10     printf("Masukkan Jumlah Nilai yang Diinput : ");
11     scanf("%d", &n);
12     for(i=1; i<=n; i++)
13     {
14         printf("Nilai ke-%d : ", i);
15         scanf("%f", &nilai);
16         jumlah=jumlah+nilai;
17         if(i==1)
18         {
19             max=nilai;
20             min=nilai;
21         }
22         else
23         {
24             if(max<nilai)
25                 max=nilai;
26             if(min>nilai)
27                 min=nilai;
28         }
29         rata=jumlah/n;
30     }
31     printf("\nNilai Minimum : %0.2f\n", min);
32     printf("Nilai Maximum : %0.2f\n", max);
33     printf("Nilai Rata-rata : %0.2f\n", rata);
34 }
35

```

Output :

```

D:\BelajarLooping4\bin\Debug\BelajarLooping4.exe
=====\tDaftar Nilai Mahasiswa\t=====
Masukkan Jumlah Nilai yang Diinput : 5
Nilai ke-1 : 78.00
Nilai ke-2 : 80.00
Nilai ke-3 : 95.00
Nilai ke-4 : 65.00
Nilai ke-5 : 60.00

Nilai Minimum : 60.00
Nilai Maximum : 95.00
Nilai Rata-rata : 75.60

Process returned 0 (0x0)   execution time : 44.913 s
Press any key to continue.

```

5. Dengan menggunakan pernyataan *nested loop*, buatlah program berikut:

input: n

output:

1 2 3 4 5 ... n

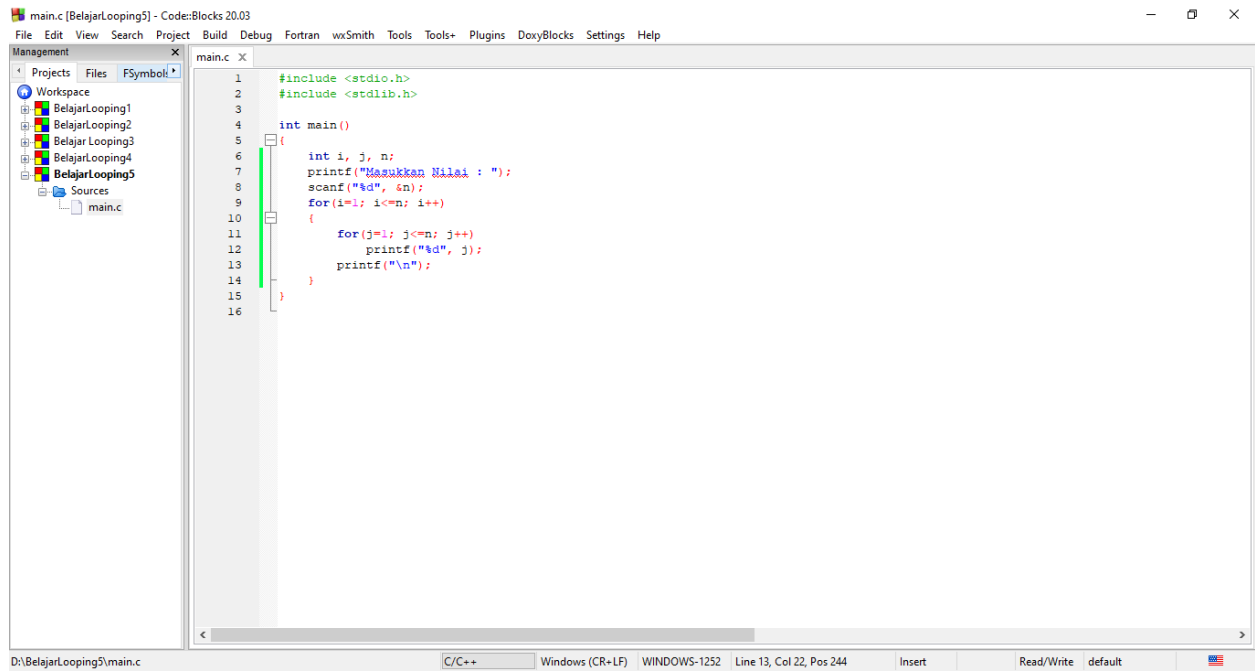
1 2 3 4 5 ... n

1 2 3 4 5 ... n n kali

.....

1 2 3 4 5 ... n

Jawab :



The screenshot shows a C code editor window titled "main.c [BelajarLooping5] - Code::Blocks 20.03". The code is as follows:

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     int i, j, n;
7     printf("Masukkan Nilai : ");
8     scanf("%d", &n);
9     for(i=1; i<=n; i++)
10     {
11         for(j=1; j<=n; j++)
12             printf("%d", j);
13         printf("\n");
14     }
15 }
16
```

The status bar at the bottom indicates the file path "D:\BelajarLooping5\main.c", the compiler "C/C++", the operating system "Windows (CR+LF)", the window title "WINDOWS-1252", the current position "Line 13, Col 22, Pos 244", and the editor mode "Insert".

Output :

The screenshot shows a Windows command prompt window titled "D:\BelajarLooping5\bin\Debug\BelajarLooping5.exe". The user has entered "Masukkan Nilai : 10". The program outputs the number "12345678910" ten times, once per line. Below the output, it says "Process returned 0 (0x0) execution time : 2.839 s" and "Press any key to continue.". A single character, possibly a space or a very small letter, is visible at the bottom left of the window.

```
D:\BelajarLooping5\bin\Debug\BelajarLooping5.exe
Masukkan Nilai : 10
12345678910
12345678910
12345678910
12345678910
12345678910
12345678910
12345678910
12345678910
12345678910
12345678910
Process returned 0 (0x0)   execution time : 2.839 s
Press any key to continue.

```

6. Dengan menggunakan pernyataan *nested loop*, buatlah program berikut:

input: n

output:

1

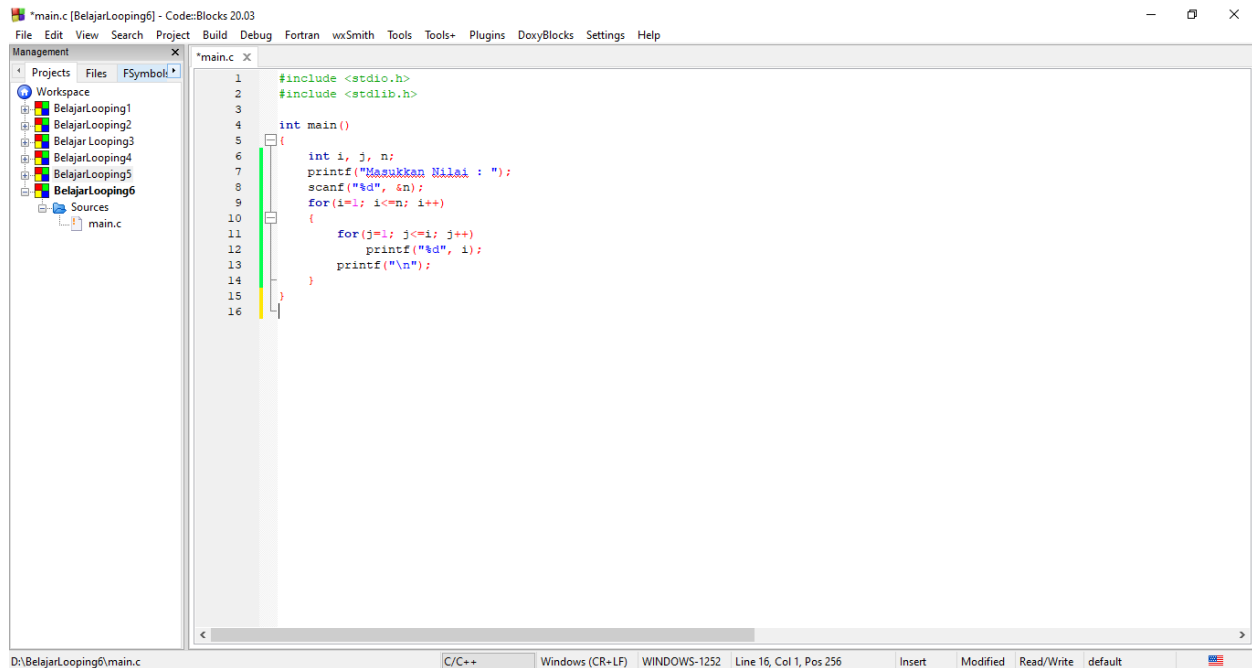
22

333 n kali

.....

n n n n n ... n

Jawab :

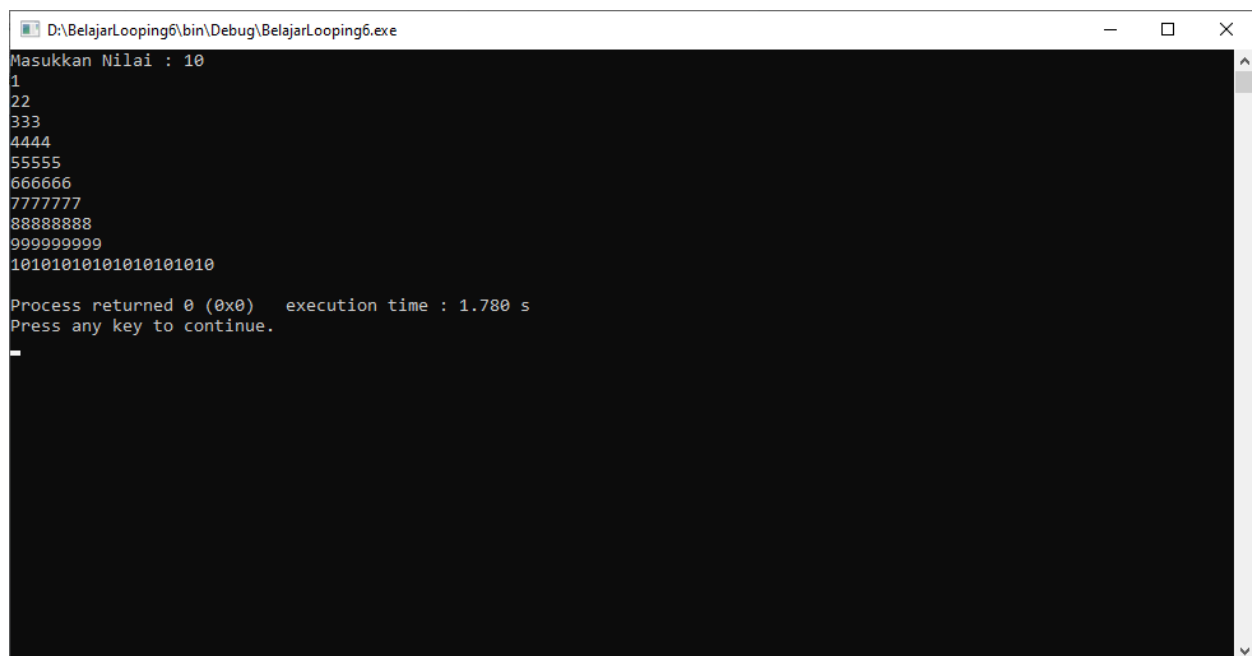


The screenshot shows the Code::Blocks IDE with a C program open. The program uses nested loops to print a pattern of numbers. The code is as follows:

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     int i, j, n;
7     printf("Masukkan Nilai : ");
8     scanf("%d", &n);
9     for(i=1; i<=n; i++)
10     {
11         for(j=1; j<=i; j++)
12             printf("%d", i);
13         printf("\n");
14     }
15 }
16
```

The status bar at the bottom indicates the file is `D:\BelajarLooping6\main.c`, the compiler is `C/C++`, and the current line is 16, column 1, position 256.

Output :



The screenshot shows a Windows command prompt window titled `D:\BelajarLooping6\bin\Debug\BelajarLooping6.exe`. The output of the program is as follows:

```
Masukkan Nilai : 10
1
22
333
4444
55555
666666
7777777
88888888
99999999
10101010101010101010

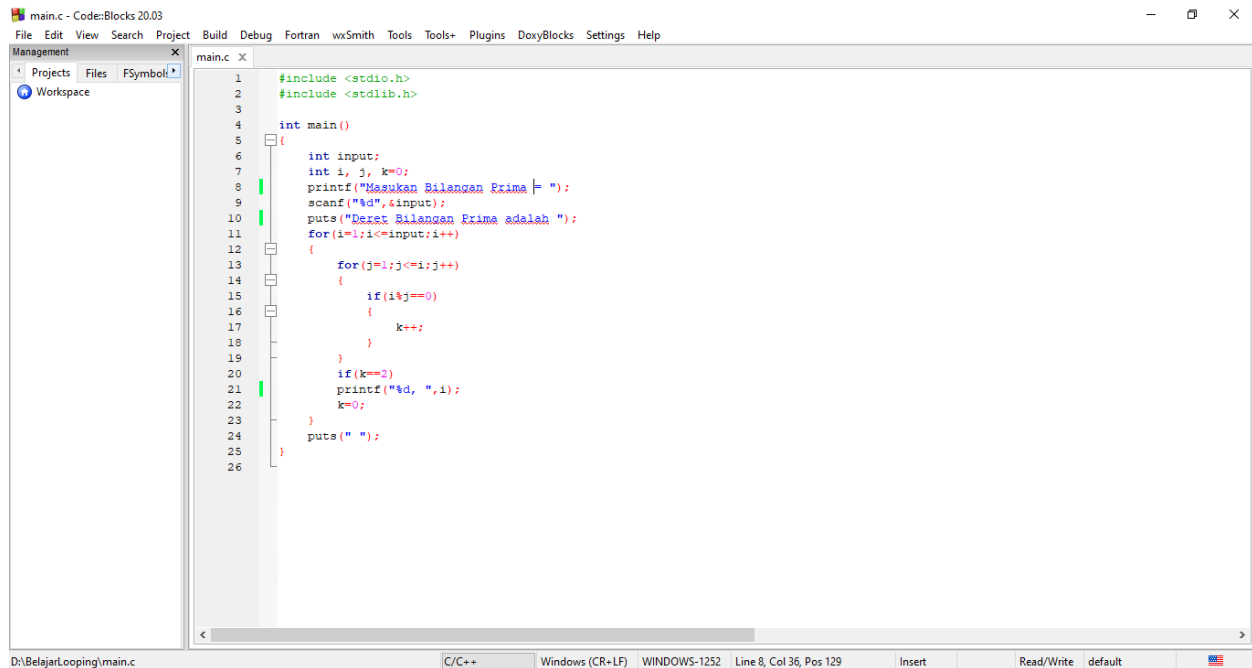
Process returned 0 (0x0)   execution time : 1.780 s
Press any key to continue.
```

7. Dengan menggunakan pernyataan *nested loop*, buatlah program berikut:

input: n

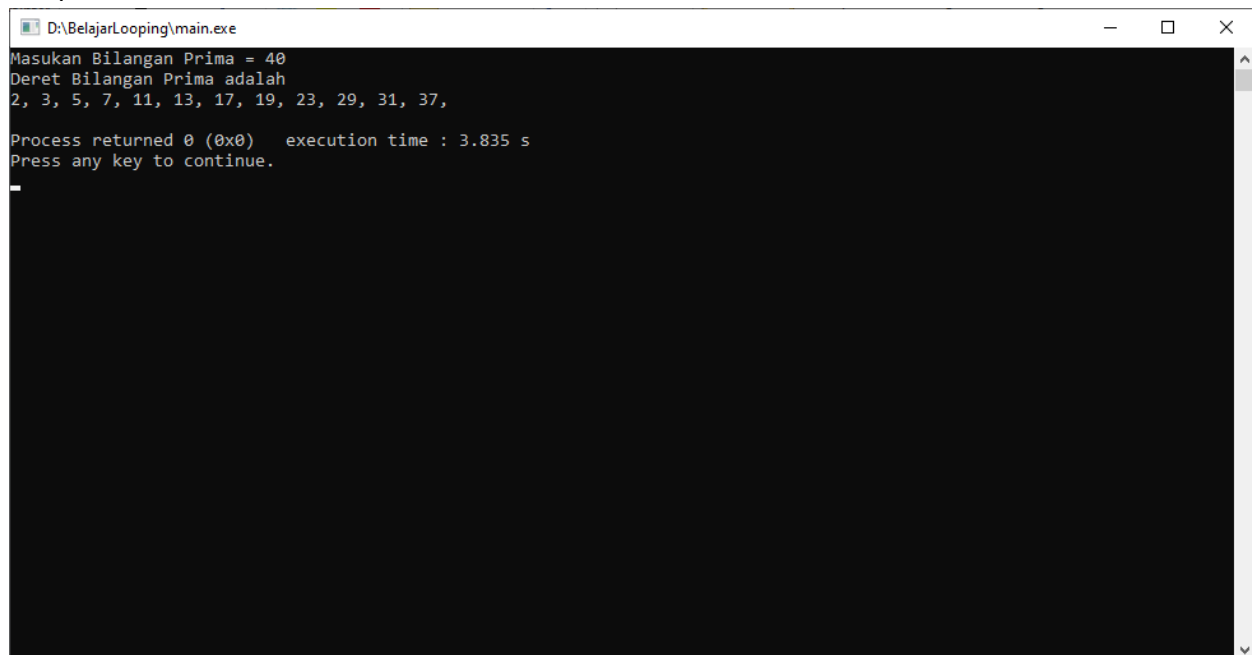
output: 2 3 5 7 11.... Bilangan prima ke n

Jawab :



```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     int input;
7     int i, j, k=0;
8     printf("Masukan Bilangan Prima = ");
9     scanf("%d", &input);
10    puts("Deret Bilangan Prima adalah ");
11    for(i=1; i<=input; i++)
12    {
13        for(j=1; j<=i; j++)
14        {
15            if(i%j==0)
16            {
17                k++;
18            }
19        }
20        if(k==2)
21        {
22            printf("%d ", i);
23            k=0;
24        }
25        puts(" ");
26    }
```

Output :



```
D:\BelajarLooping\main.exe
Masukan Bilangan Prima = 40
Deret Bilangan Prima adalah
2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37,

Process returned 0 (0x0)   execution time : 3.835 s
Press any key to continue.
```

8. Dengan menggunakan pernyataan *nested loop*, buatlah program berikut:

input: n

output: 0 1 3 6 10 15 21 28 Bilangan ke n

Jawab :

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     int i, j=0, n;
7     printf("Masukkan Nilai : ");
8     scanf("%d", &n);
9     for(i=0; i<=n; i++)
10     {
11         j=j+i;
12         printf("%d, ", j);
13     }
14     printf("\n");
15 }
16
```

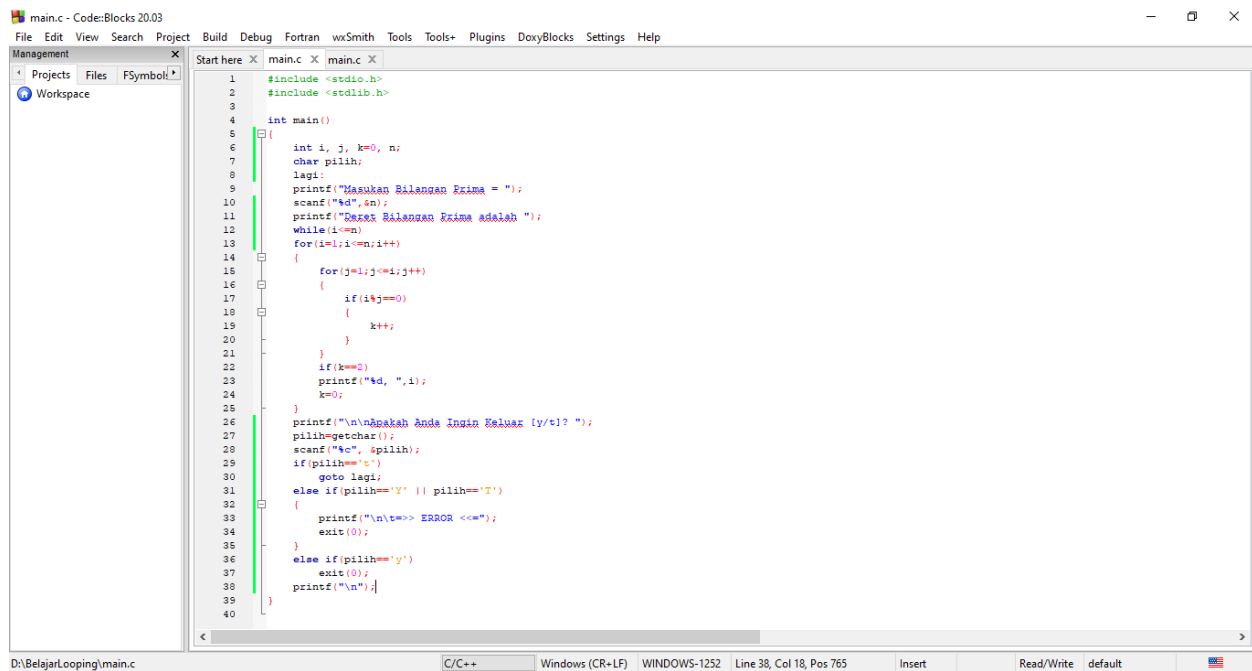
Output :

```
D:\BelajarLooping7\main.exe
Masukkan Nilai : 10
0, 1, 3, 6, 10, 15, 21, 28, 36, 45, 55,
Process returned 0 (0x0)   execution time : 21.228 s
Press any key to continue.
```

9. Pada akhir setiap 2 buah program diatas tambahkan tanya “apakah anda ingin keluar (y/t)?”, pertanyaan tersebut hanya bisa di jawab dengan huruf ‘y’ (y kecil) dan ‘t’(t kecil). Dan akan keluar dari program setelah dijawab dengan ‘y’ (y kecil).

Jawab :

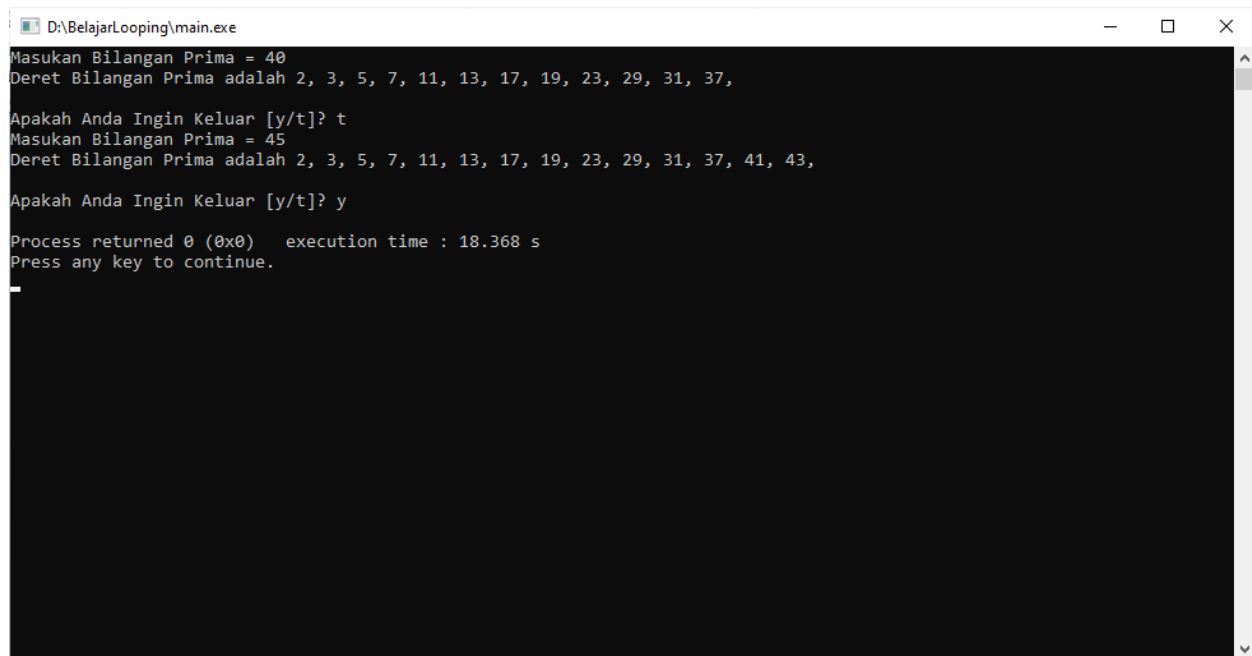
1.



The screenshot shows the Code::Blocks IDE with a C program in the editor. The program is designed to generate a sequence of prime numbers. It starts by including `<stdio.h>` and `<stdlib.h>`. The `main` function declares variables `i`, `j`, `k`, `n`, and `pilih`. It prompts the user to enter a number `n` and then generates a sequence of prime numbers up to `n`. The sequence is printed as "Deret Bilangan Prima adalah". The program also includes a loop to check if the user wants to continue or exit.

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     int i, j, k=0, n;
7     char pilih;
8     lagi:
9     printf("Masukan Bilangan Prima = ");
10    scanf("%d",&n);
11    printf("Deret Bilangan Prima adalah ");
12    while(i<=n)
13    {
14        for(j=1;j<=i;j++)
15        {
16            if(i%j==0)
17            {
18                k++;
19            }
20        }
21        if(k==2)
22        {
23            printf("%d, ",i);
24            k=0;
25        }
26        printf("\nApakah Anda Ingin Keluar [y/t]? ");
27        pilih=getchar();
28        scanf("%c",&pilih);
29        if(pilih=='t')
30            goto lagi;
31        else if(pilih=='Y' || pilih=='T')
32        {
33            printf("\n\t=> ERROR <<=");
34            exit(0);
35        }
36        else if(pilih=='y')
37            exit(0);
38        printf("\n");
39    }
40 }
```

Output :



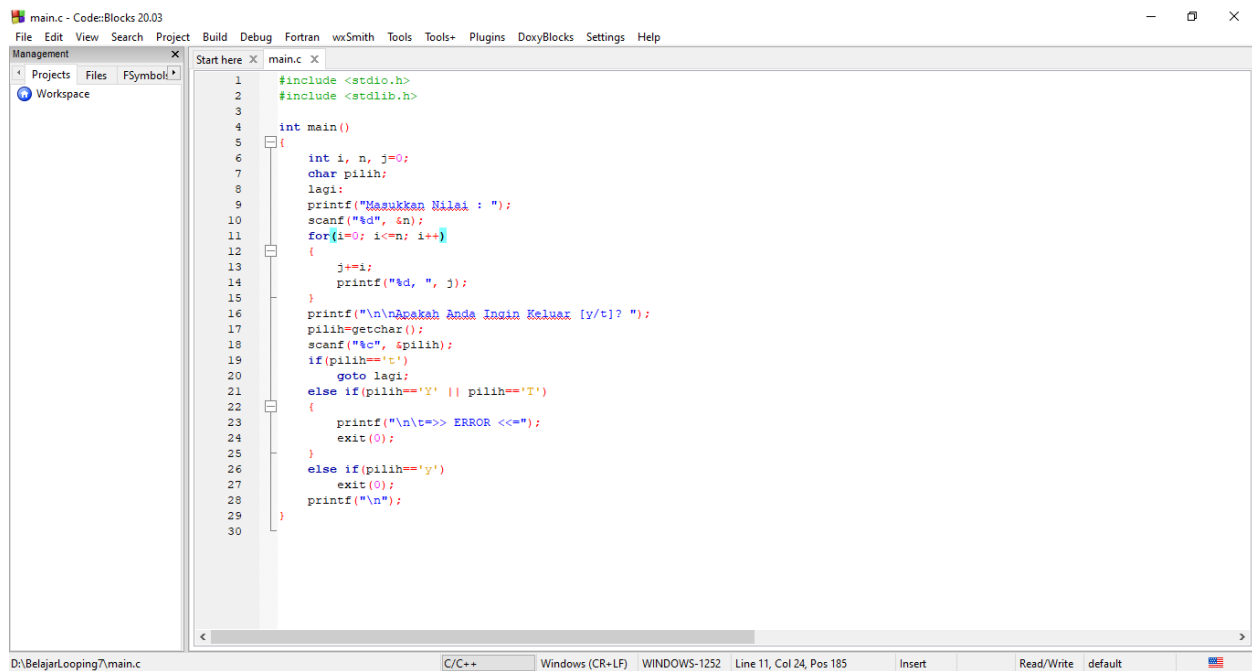
The screenshot shows the command prompt output of the program. It displays the sequence of prime numbers generated for two different inputs: 40 and 45. The output is as follows:

```
D:\BelajarLooping\main.exe
Masukan Bilangan Prima = 40
Deret Bilangan Prima adalah 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37,

Apakah Anda Ingin Keluar [y/t]? t
Masukan Bilangan Prima = 45
Deret Bilangan Prima adalah 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43,

Apakah Anda Ingin Keluar [y/t]? y
Process returned 0 (0x0)   execution time : 18.368 s
Press any key to continue.
```

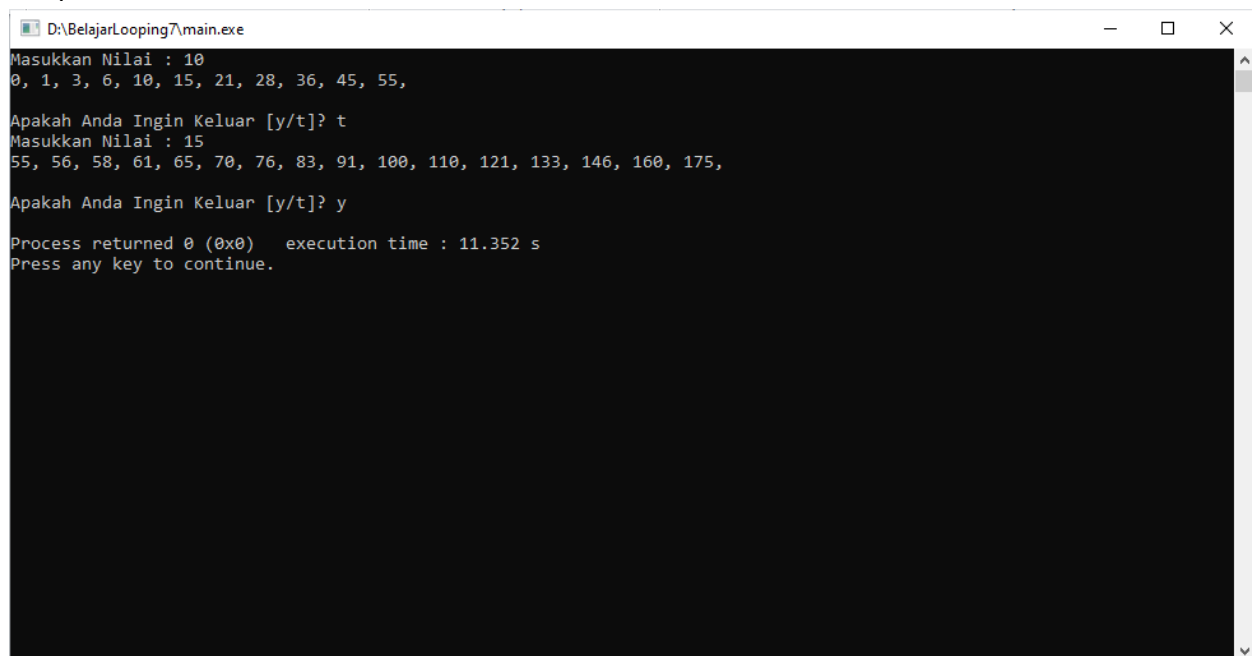
2.



The screenshot shows the Code::Blocks IDE with a C program in the editor. The program calculates the sum of an arithmetic series based on user input for the number of terms (n) and the common difference (j). It uses a for loop to calculate the sum and a goto statement to loop back to the input phase if the user chooses to continue.

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     int i, n, j=0;
7     char pilih;
8     lagi:
9     printf("Masukkan Nilai : ");
10    scanf("%d", &n);
11    for(i=0; i<=n; i++)
12    {
13        j+=i;
14        printf("%d, ", j);
15    }
16    printf("\n\nApakah Anda Ingin Keluar [y/t]? ");
17    pilih=getchar();
18    scanf("%c", &pilih);
19    if(pilih=='t')
20        goto lagi;
21    else if(pilih=='Y' || pilih=='T')
22    {
23        printf("\n\t=> ERROR <=<");
24        exit(0);
25    }
26    else if(pilih=='y')
27        exit(0);
28    printf("\n");
29 }
30
```

Output :



The screenshot shows a Windows command prompt window titled "D:\BelajarLooping7\main.exe". It displays the output of the program, including the sum of an arithmetic series for n=10 and n=15, and the user's choice to continue or exit.

```
D:\BelajarLooping7\main.exe
Masukkan Nilai : 10
0, 1, 3, 6, 10, 15, 21, 28, 36, 45, 55,

Apakah Anda Ingin Keluar [y/t]? t
Masukkan Nilai : 15
55, 56, 58, 61, 65, 70, 76, 83, 91, 100, 110, 121, 133, 146, 160, 175,

Apakah Anda Ingin Keluar [y/t]? y

Process returned 0 (0x0)   execution time : 11.352 s
Press any key to continue.
```

