CA-Assignment.

18207

G p s a kriyanji.

Introduction about the program.

This is about to create a C program which gives the number and square value of the number in front of the given number with the system number.

In there used IDE is Codeblocks 20.03

First program is about to calculate the square value of given number with the system date and time.

Second program is about to create a loop in 20 times.

Third program is details of a txt file.

Fourth program is to read text file from the hard disk and count, given number, square value and the system time and display again with the current system time.

Different Technology and codes use to develop above program.

Technology = C Programming Language.

Used = Codeblocks Software.

1. System Time Generating for every program at the end :

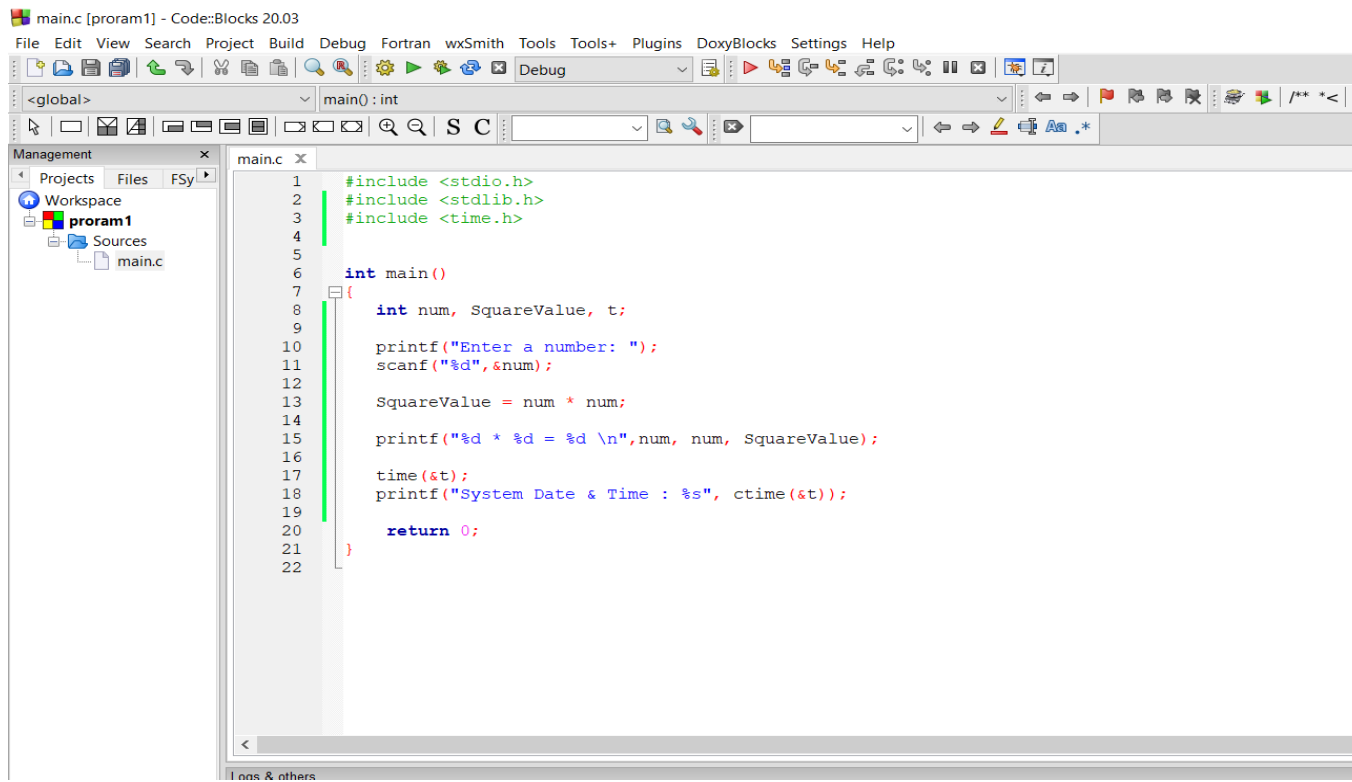   ```
   #include
   Int t;
    time(&t);
   ```
2. Entering a File path to txt file and displaying of txt file information was also a new technique that gained from this program:
   ```
   fpointer=fopen("c:\\temp\\1.txt","w");
   ```
   (In here "w" was used to write and "r" was used to read the data in the source code.)

# Source Code

## Program 1.



```c
#include <stdio.h>
#include <stdlib.h>
#include <time.h>

int main()
{
    int num, SquareValue, t;

    printf("Enter a number: ");
    scanf("%d",&num);

    SquareValue = num * num;

    printf("%d * %d = %d \n",num, num, SquareValue);

    time(&t);
    printf("System Date & Time : %s", ctime(&t));

    return 0;
}
```

Program 2,3,4.

```c
#include <stdio.h>
#include <stdlib.h>

int main()
{
    int num, SquareRoot;
    int j;

    FILE * fPointer;
    fPointer = fopen("output.txt", "w");

    for(j=0; j<20; j++)
    {
        size_t Time;
        time(&Time);

        printf("\nEnter number %d to find the square value :", j+1);
        scanf("%d", &num);

        SquareRoot = num * num;


        printf("\nThe Square value of the number is : %d * %d = %d  %s\n", num, num, SquareRoot,ctime(&Time));


        fprintf(fPointer, "\nThe Square value of the number is : %d * %d = %d  %s\n" , num, num, SquareRoot,ctime(&Time));
    }

    fclose(fPointer);
    FILE * fp;
    char info[250];
```

```c
        fprintf(fPointer, "\nThe Square value of the number is : %d * %d = %d  %s\n" , num, num, SquareRoot,ctime(&Time));
    }

    fclose(fPointer);
    FILE * fp;
    char info[250];

    fp = fopen("output.txt", "r");

    if(fp ==NULL)
    {
        printf("Unable to open the file\n");
    }
    else
    {
        while(!feof(fp))
        {
            fgets(info,250,fp);
            printf("%s", info);
        }
    }

    system("getmac");
    system("ipconfig/all");
    getch();
    return 0;
}
```

Output of the program


```
C:\Users\dtc\Desktop\vs\assignment\bin\Debug\assignment.exe

Enter number 1 to find the square value :1

The Square value of the number is : 1 * 1 = 1  Sun Jul 12 15:33:04 2020

Enter number 2 to find the square value :2

The Square value of the number is : 2 * 2 = 4  Sun Jul 12 15:33:06 2020

Enter number 3 to find the square value :3

The Square value of the number is : 3 * 3 = 9  Sun Jul 12 15:33:09 2020

Enter number 4 to find the square value :4

The Square value of the number is : 4 * 4 = 16  Sun Jul 12 15:33:09 2020

Enter number 5 to find the square value :5

The Square value of the number is : 5 * 5 = 25  Sun Jul 12 15:33:10 2020

Enter number 6 to find the square value :6

The Square value of the number is : 6 * 6 = 36  Sun Jul 12 15:33:11 2020

Enter number 7 to find the square value :7

The Square value of the number is : 7 * 7 = 49  Sun Jul 12 15:33:11 2020

Enter number 8 to find the square value :8

The Square value of the number is : 8 * 8 = 64  Sun Jul 12 15:33:12 2020

Enter number 9 to find the square value :9

The Square value of the number is : 9 * 9 = 81  Sun Jul 12 15:33:12 2020

Enter number 10 to find the square value :10

The Square value of the number is : 10 * 10 = 100  Sun Jul 12 15:33:13 2020
```

Activate Windows
Go to Settings to activate Windows.


```
C:\Users\dtc\Desktop\vs\assignment\bin\Debug\assignment.exe

Enter number 9 to find the square value :9

The Square value of the number is : 9 * 9 = 81  Sun Jul 12 15:33:12 2020

Enter number 10 to find the square value :10

The Square value of the number is : 10 * 10 = 100  Sun Jul 12 15:33:13 2020

Enter number 11 to find the square value :11

The Square value of the number is : 11 * 11 = 121  Sun Jul 12 15:33:14 2020

Enter number 12 to find the square value :12

The Square value of the number is : 12 * 12 = 144  Sun Jul 12 15:33:15 2020

Enter number 13 to find the square value :13

The Square value of the number is : 13 * 13 = 169  Sun Jul 12 15:33:16 2020

Enter number 14 to find the square value :14

The Square value of the number is : 14 * 14 = 196  Sun Jul 12 15:33:17 2020

Enter number 15 to find the square value :15

The Square value of the number is : 15 * 15 = 225  Sun Jul 12 15:33:18 2020

Enter number 16 to find the square value :16

The Square value of the number is : 16 * 16 = 256  Sun Jul 12 15:33:18 2020

Enter number 17 to find the square value :17

The Square value of the number is : 17 * 17 = 289  Sun Jul 12 15:33:19 2020

Enter number 18 to find the square value :18

The Square value of the number is : 18 * 18 = 324  Sun Jul 12 15:33:20 2020
```

Activate Windows
Go to Settings to activate Windows.

```
Enter number 18 to find the square value :18

The Square value of the number is : 18 * 18 = 324  Sun Jul 12 15:33:20 2020


Enter number 19 to find the square value :19

The Square value of the number is : 19 * 19 = 361  Sun Jul 12 15:33:22 2020


Enter number 20 to find the square value :20

The Square value of the number is : 20 * 20 = 400  Sun Jul 12 15:33:23 2020

Unable to open the file

Physical Address    Transport Name
=================== =============================================================
D0-C5-D3-FD-6A-DD   \Device\Tcpip_{8FC164B2-1273-4946-B3EE-870C95D4514D}
04-92-26-0E-F5-AA   Media disconnected

Windows IP Configuration

   Host Name . . . . . . . . . . . . : DESKTOP-I0CN4F1
   Primary Dns Suffix  . . . . . . . :
   Node Type . . . . . . . . . . . . : Hybrid
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No
   DNS Suffix Search List. . . . . . : nsbm.lk

Ethernet adapter Ethernet:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Realtek PCIe GBE Family Controller
   Physical Address. . . . . . . . . : 04-92-26-0E-F5-AA
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 1:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
   Physical Address. . . . . . . . . : D2-C5-D3-FD-6A-DD
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 2:
```

Activate Windows
Go to Settings to activate Windows.

```
The Square value of the number is : 20 * 20 = 400  Sun Jul 12 15:33:23 2020

Unable to open the file

Physical Address    Transport Name
=================== =============================================================
D0-C5-D3-FD-6A-DD   \Device\Tcpip_{8FC164B2-1273-4946-B3EE-870C95D4514D}
04-92-26-0E-F5-AA   Media disconnected

Windows IP Configuration

   Host Name . . . . . . . . . . . . : DESKTOP-I0CN4F1
   Primary Dns Suffix  . . . . . . . :
   Node Type . . . . . . . . . . . . : Hybrid
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No
   DNS Suffix Search List. . . . . . : nsbm.lk

Ethernet adapter Ethernet:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Realtek PCIe GBE Family Controller
   Physical Address. . . . . . . . . : 04-92-26-0E-F5-AA
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 1:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
   Physical Address. . . . . . . . . : D2-C5-D3-FD-6A-DD
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 2:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Microsoft Wi-Fi Direct Virtual Adapter #2
   Physical Address. . . . . . . . . : E2-C5-D3-FD-6A-DD
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . : nsbm.lk
   Description . . . . . . . . . . . : Qualcomm Atheros QCA9377 Wireless Network Adapter
```

Activate Windows
Go to Settings to activate Windows.

Media State . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . : Microsoft Wi-Fi Direct Virtual Adapter
Physical Address. . . . . : D2-C5-D3-FD-6A-DD
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 2:

Media State . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . : Microsoft Wi-Fi Direct Virtual Adapter #2
Physical Address. . . . . : E2-C5-D3-FD-6A-DD
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . : nsbm.lk
Description . . . . : Qualcomm Atheros QCA9377 Wireless Network Adapter
Physical Address. . . . . : D0-C5-D3-FD-6A-DD
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::25d6:ca3a:8e49:b0bf%12(Preferred)
IPv4 Address. . . . . : 10.10.72.121(Preferred)
Subnet Mask . . . . : 255.255.224.0
Lease Obtained. . . . . : Sunday, July 12, 2020 10:02:31 AM
Lease Expires . . . . : Sunday, July 12, 2020 11:16:09 PM
Default Gateway . . . . : 10.10.64.1
DHCP Server . . . . : 10.10.10.12
DHCPv6 IAID . . . . : 215008723
DHCPv6 Client DUID. . . . . : 00-01-00-01-26-8C-53-3C-04-92-26-0E-F5-AA
DNS Servers . . . . : 10.10.10.11
                                    8.8.8.8
NetBIOS over Tcpip. . . . . : Enabled

Process returned 0 (0x0)   execution time : 39.803 s
Press any key to continue.

Activate Windows
Go to Settings to activate Windows.

File path.

Output - Notepad
File Edit Format View Help

1.Square value of 1.00 : 1.000
Current local time and date: Sun Jul 12 10:19:08 2020

2.Square value of 2.00 : 4.000
Current local time and date: Sun Jul 12 10:19:10 2020

3.Square value of 3.00 : 9.000
Current local time and date: Sun Jul 12 10:19:11 2020

4.Square value of 4.00 : 16.000
Current local time and date: Sun Jul 12 10:19:12 2020

5.Square value of 5.00 : 25.000
Current local time and date: Sun Jul 12 10:19:13 2020

6.Square value of 6.00 : 36.000
Current local time and date: Sun Jul 12 10:19:13 2020

7.Square value of 7.00 : 49.000
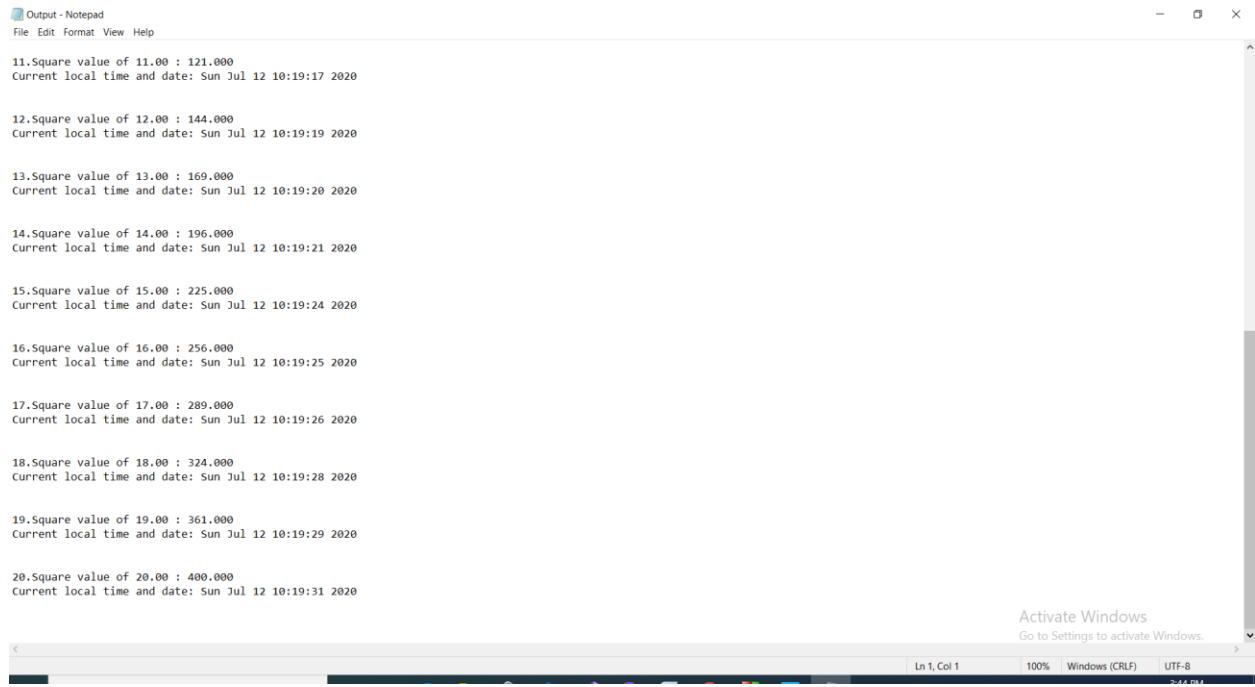Current local time and date: Sun Jul 12 10:19:14 2020

8.Square value of 8.00 : 64.000
Current local time and date: Sun Jul 12 10:19:14 2020

9.Square value of 9.00 : 81.000
Current local time and date: Sun Jul 12 10:19:15 2020

10.Square value of 10.00 : 100.000
Current local time and date: Sun Jul 12 10:19:17 2020

11.Square value of 11.00 : 121.000
Current local time and date: Sun Jul 12 10:19:17 2020

Activate Windows
Go to Settings to activate Windows.

Ln 1, Col 1   100%   Windows (CRLF)   UTF-8

Output - Notepad
File Edit Format View Help

```
11.Square value of 11.00 : 121.000
Current local time and date: Sun Jul 12 10:19:17 2020


12.Square value of 12.00 : 144.000
Current local time and date: Sun Jul 12 10:19:19 2020


13.Square value of 13.00 : 169.000
Current local time and date: Sun Jul 12 10:19:20 2020


14.Square value of 14.00 : 196.000
Current local time and date: Sun Jul 12 10:19:21 2020


15.Square value of 15.00 : 225.000
Current local time and date: Sun Jul 12 10:19:24 2020


16.Square value of 16.00 : 256.000
Current local time and date: Sun Jul 12 10:19:25 2020


17.Square value of 17.00 : 289.000
Current local time and date: Sun Jul 12 10:19:26 2020


18.Square value of 18.00 : 324.000
Current local time and date: Sun Jul 12 10:19:28 2020


19.Square value of 19.00 : 361.000
Current local time and date: Sun Jul 12 10:19:29 2020


20.Square value of 20.00 : 400.000
Current local time and date: Sun Jul 12 10:19:31 2020
```

Activate Windows
Go to Settings to activate Windows.

Ln 1, Col 1   100%   Windows (CRLF)   UTF-8

Discussion and knowledge.

In this assignment I've found out, how to insert the current Date & Time to a program. • I also improved my knowledge on the usage of basic C programming skills. • Entering, Storing and Retrieving data from txt file was a new thing that I've learnt from this assignment. • The MAC address representation to a program is also a new thing that I learnt from this assignment.