

# Assignment – 1

- Write a C program to check positive, negative or zero using simple if or if else. C program to input any number from user and check whether the given number is positive, negative or zero. Logic to check negative, positive or zero in C programming.

The screenshot displays the Dev-C++ IDE interface. The main window shows the source code for 'QUESTION 1.cpp', which is a C program designed to check if a user-input number is positive, negative, or zero. The code uses the `if-else` structure. A secondary window titled 'C:\Users\Admin\OneDrive\Documents\QUESTION 1.exe' shows the program's execution. It prompts the user to 'Enter a number: 45' and outputs '45 is positive'. The bottom status bar indicates the program compiled successfully with 0 errors and 0 warnings, and the output file is 'QUESTION 1.exe'.

```
1 #include <stdio.h>
2 int main() {
3     int num;
4     printf("Enter a number: ");
5     scanf("%d", &num);
6     if(num > 0) {
7         printf("%d is positive", num);
8     }
9     else if(num < 0) {
10        printf("%d is negative", num);
11    }
12    else {
13        printf("The number is zero");
14    }
15    return 0;
16 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\OneDrive\Documents\QUESTION 1.exe
- Output Size: 128.6015625 KiB
- Compilation Time: 1.28s

Line: 16 Col: 2 Sel: 0 Lines: 16 Length: 318 Insert Done parsing in 0.14 seconds

1. Write a C program to check whether a number is divisible by 5 and 11 or not using if else. How to check divisibility of any number in C programming. C program to enter any number and check whether it is divisible by 5 and 11 or not. Logic to check divisibility of a number in C program.

The screenshot displays the Dev-C++ IDE interface. The main editor window shows a C program named 'Question -2.c' with the following code:

```
1 #include <stdio.h>
2 int main() {
3     int num;
4     printf("Enter a number: ");
5     scanf("%d", &num);
6     if(num % 5 == 0 && num % 11 == 0) {
7         printf("%d is divisible by 5 and 11", num);
8     }
9     else {
10        printf("%d is not divisible by 5 and 11", num);
11    }
12    return 0;
13 }
```

The program is compiled and executed. The output window shows the following text:

```
Enter a number: 55
55 is divisible by 5 and 11
-----
Process exited after 10.75 seconds with return value 0
Press any key to continue . . .
```

The status bar at the bottom indicates the current line and column: Line: 11, Col: 6. The taskbar at the bottom shows the system clock as 20:16 on 11-04-2023.

1. Write a C program to check whether a number is divisible by 5 and 11 or not using if else. How to check divisibility of any number in C programming. C program to enter any number and check whether it is divisible by 5 and 11 or not. Logic to check divisibility of a number in C program.

The screenshot displays the Dev-C++ IDE interface. The main editor window shows a C program named 'QUESTION 1.cpp' with the following code:

```
1 #include <stdio.h>
2 int main() {
3     char ch;
4     printf("Enter a character: ");
5     scanf("%c", &ch);
6     if ((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z'))
7         printf("%c is an alphabet.", ch);
8     else
9         printf("%c is not an alphabet.", ch);
10    return 0;
11 }
```

The IDE's status bar at the bottom indicates 'Line: 1 Col: 19 Sel: 0 Lines: 11 Length: 288 Insert Done parsing in 0.016 seconds'. The 'Compiler' tab at the bottom shows the following compilation results:

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\OneDrive\Documents\Question-3.exe
- Output Size: 128.6015625 KiB
- Compilation Time: 1.41s
```

An output window titled 'C:\Users\Admin\OneDrive\Documents\Question-3.exe' is open, showing the program's execution. It displays the prompt 'Enter a character: g', the output 'g is an alphabet.', and a separator line. Below the separator, it shows 'Process exited after 2.753 seconds with return value 0' and 'Press any key to continue . . .'. The Windows taskbar at the bottom shows the time as 20:24 on 11-04-2023.

# 1. Write a C program to count the Vowels in the given string.

The screenshot displays the Dev-C++ IDE interface. The main editor window shows a C program for counting vowels in a string. The code is as follows:

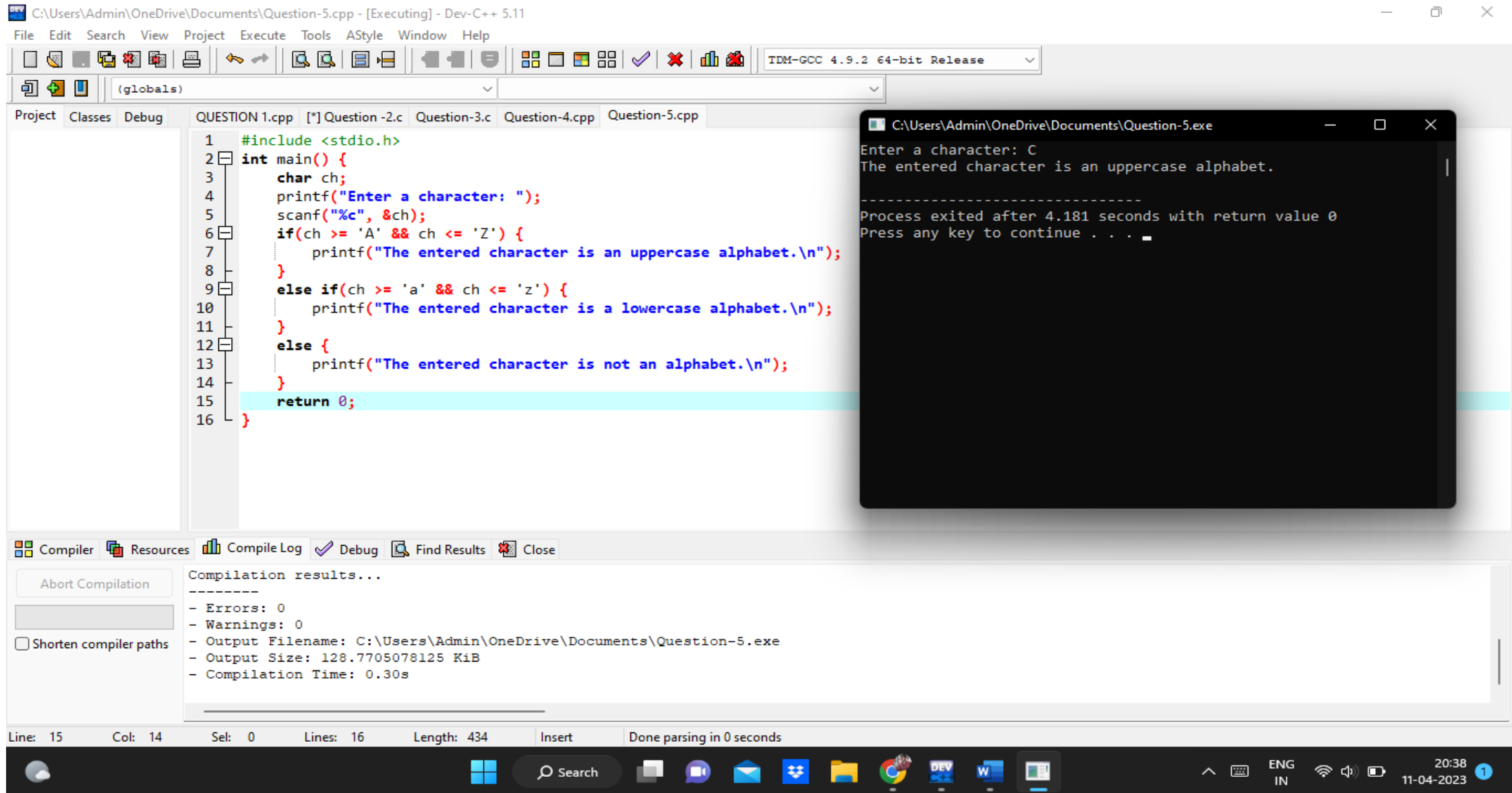
```
4 {  
5     char str[100];  
6     int i, count = 0;  
7  
8     scanf("%s", str);  
9  
10    //iterate the string  
11    for(i = 0; str[i] != '\0'; i++)  
12    {  
13        if( str[i] == 'a' ||  
14            str[i] == 'e' ||  
15            str[i] == 'i' ||  
16            str[i] == 'o' ||  
17            str[i] == 'u' )  
18        {  
19            count++;  
20        }  
21    }  
22    printf("vowel count = %d\n", count);  
23    return 0;  
24 }
```

The output window, titled "C:\Users\Admin\OneDrive\Documents\Question-4.exe", shows the program's execution:

```
programming  
vowel count = 3  
-----  
Process exited after 23.68 seconds with return value 0  
Press any key to continue . . .
```

The bottom status bar indicates the current line is 22, column 40, and the program is done parsing in 0.015 seconds.

1. Write a C program to input character from user and check whether character is uppercase or lowercase alphabet using if else. How to check uppercase and lowercase using if else in C programming. Logic to check uppercase and lowercase alphabets in C program.



The screenshot displays the Dev-C++ IDE interface. The main window shows the source code for 'QUESTION-5.cpp'. The code is as follows:

```
1 #include <stdio.h>
2 int main() {
3     char ch;
4     printf("Enter a character: ");
5     scanf("%c", &ch);
6     if(ch >= 'A' && ch <= 'Z') {
7         printf("The entered character is an uppercase alphabet.\n");
8     }
9     else if(ch >= 'a' && ch <= 'z') {
10        printf("The entered character is a lowercase alphabet.\n");
11    }
12    else {
13        printf("The entered character is not an alphabet.\n");
14    }
15    return 0;
16 }
```

The 'return 0;' line is highlighted in blue. Below the code editor, the 'Compiler' tab shows the compilation results:

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\OneDrive\Documents\Question-5.exe
- Output Size: 128.7705078125 KiB
- Compilation Time: 0.30s
```

An output window titled 'C:\Users\Admin\OneDrive\Documents\Question-5.exe' is open, showing the program's execution:

```
Enter a character: C
The entered character is an uppercase alphabet.

-----
Process exited after 4.181 seconds with return value 0
Press any key to continue . . .
```

The Windows taskbar at the bottom shows the system clock as 20:38 on 11-04-2023.

1. Write a C program to input amount from user and print minimum number of notes (Rs. 500, 100, 50, 20, 10, 5, 2, 1) required for the amount. How to the minimum number of notes required for the given amount in C programming. Program to find minimum number of notes required for the given denomination. Logic to find minimum number of denomination for a given amount in C program.

C:\Users\Admin\OneDrive\Documents\Question-6.cpp - [Executing] - 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 QUESTION 1.cpp [\*] Question -2.c Question-3.c Question-4.cpp Question-5.cpp Question-6.cpp

```
1 #include <stdio.h>
2 int main() {
3     int amount, notes;
4     printf("Enter the amount: ");
5     scanf("%d", &amount);
6
7     notes = amount / 500;
8     printf("Number of Rs. 500 notes required: %d\n", notes);
9     amount %= 500;
10
11    notes = amount / 100;
12    printf("Number of Rs. 100 notes required: %d\n", notes);
13    amount %= 100;
14
15    notes = amount / 50;
16    printf("Number of Rs. 50 notes required: %d\n", notes);
17    amount %= 50;
18
19    notes = amount / 20;
20    printf("Number of Rs. 20 notes required: %d\n", notes);
21    amount %= 20;
```

Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

Compilation results...

-----  
- Errors: 0  
- Warnings: 0

C:\Users\Admin\OneDrive\Documents\Question-6.exe

```
Enter the amount: 575
Number of Rs. 500 notes required: 1
Number of Rs. 100 notes required: 0
Number of Rs. 50 notes required: 1
Number of Rs. 20 notes required: 1
Number of Rs. 10 notes required: 0
Number of Rs. 5 notes required: 1
Number of Rs. 2 notes required: 0
Number of Rs. 1 notes required: 0

-----
Process exited after 6.185 seconds with return value 0
Press any key to continue . . .
```

1. Write a C program to input a number from user and count number of digits in the given integer using loop. How to find total digits in a given integer using loop in C programming. Logic to count digits in a given integer without using loop in C program.

The screenshot displays the Dev-C++ IDE with a C program open and running. The program is titled 'QUESTION 7.cpp' and is located at 'C:\Users\Admin\OneDrive\Documents\Question-7.cpp'. The code uses a while loop to count the digits of an integer entered by the user.

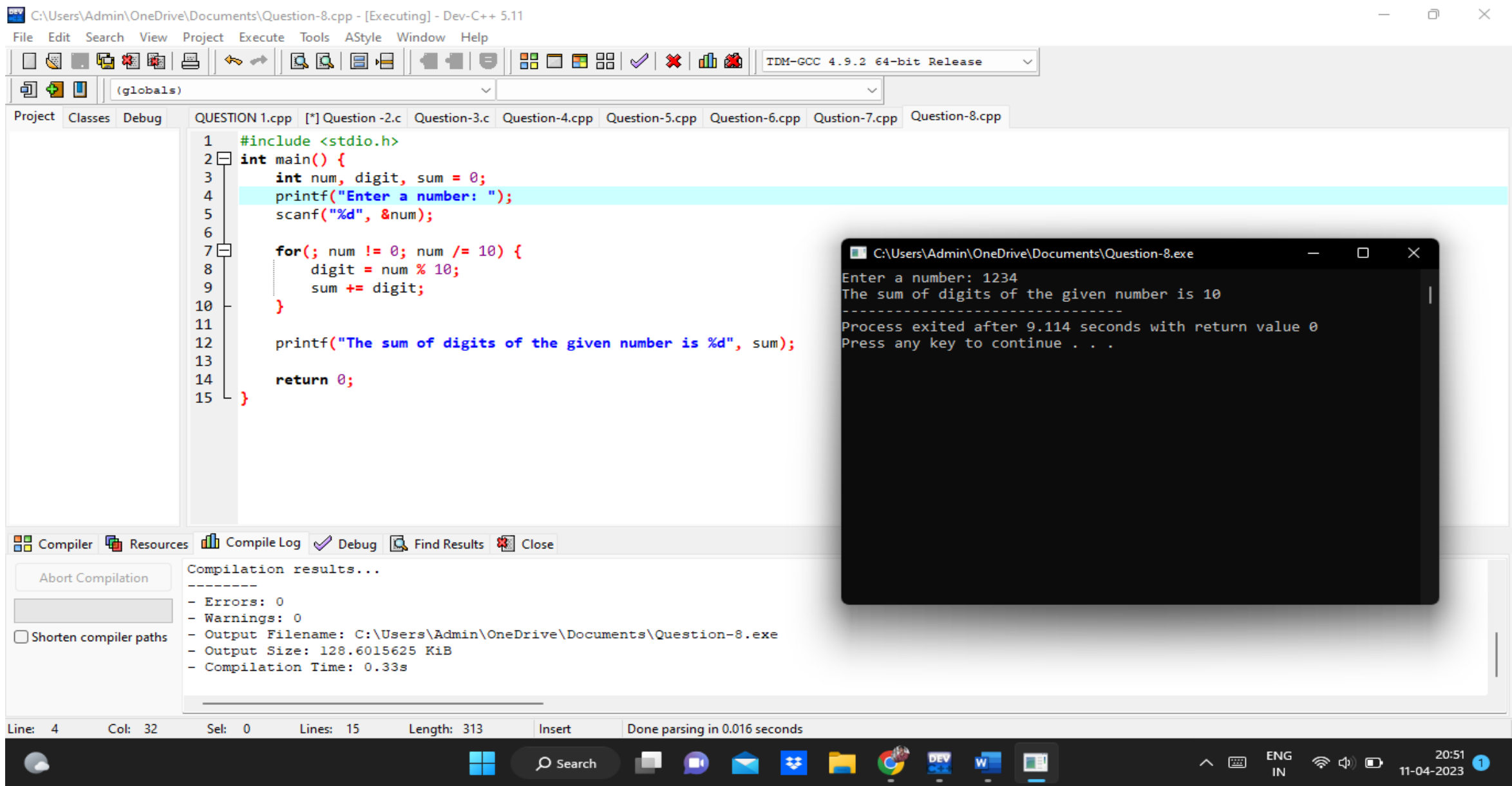
```
1 #include <stdio.h>
2 int main() {
3     int num, count = 0;
4     printf("Enter a number: ");
5     scanf("%d", &num);
6
7     while(num != 0) {
8         num /= 10;
9         count++;
10    }
11    printf("The number of digits in the given integer is %d.\n", count);
12
13    return 0;
14 }
```

The output window shows the program's execution. It prompts the user to 'Enter a number: 35419' and displays 'The number of digits in the given integer is 5.' The process exits after 11.14 seconds with a return value of 0.

Compilation results show 0 errors and 0 warnings. The output filename is 'C:\Users\Admin\OneDrive\Documents\Question-7.exe', the output size is 128.6015625 KiB, and the compilation time is 0.20s.

Line: 9 Col: 17 Sel: 0 Lines: 14 Length: 289 Insert Done parsing in 0.015 seconds

1. Write a C program to input a number and calculate sum of digits using for loop. How to find sum of digits of a number in C program. Logic to find sum of digits of a given number in C programming.





1. Write a C program to input a number from user and find reverse of the given number using for loop. How to find reverse of any number using loop in C program. Logic to find reverse of a number in C programming.

The image shows a screenshot of a C program in Dev-C++ and its execution output. The program is designed to reverse a number using a for loop.

**C Program Code:**

```
1 #include <stdio.h>
2 int main() {
3     int num, digit, rev = 0;
4     printf("Enter a number: ");
5     scanf("%d", &num);
6
7     for(; num != 0; num /= 10) {
8         digit = num % 10;
9         rev = rev * 10 + digit;
10    }
11
12    printf("The reverse of the given number is %d", rev);
13    return 0;
14 }
```

**Execution Output:**

```
C:\Users\Admin\OneDrive\Documents\Question-9.exe
Enter a number: 12345
The reverse of the given number is 54321
-----
Process exited after 3.838 seconds with return value 0
Press any key to continue . . .
```

**Compilation Results:**

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\OneDrive\Documents\Question-9.exe
- Output Size: 128.1015625 KiB
- Compilation Time: 0.19s
```

1. Write a C program to input decimal number from user and convert to binary number system. How to convert from decimal number to binary number system in C program. Logic to convert decimal to binary number system in C programming.

The screenshot displays the Dev-C++ 5.11 IDE with a C program for converting a decimal number to binary. The program is titled 'QUESTION 10.cpp' and is located at 'C:\Users\Admin\OneDrive\Documents\Question-10.cpp'. The code is as follows:

```
1  #include <stdio.h>
2
3  int main() {
4      int dec, bin = 0, base = 1, rem;
5      printf("Enter a decimal number: ");
6      scanf("%d", &dec);
7
8      while(dec != 0) {
9          rem = dec % 2;
10         bin += rem * base;
11         base *= 10;
12         dec /= 2;
13     }
14
15     printf("The binary representation of the given decimal number is %d", bin);
16
17     return 0;
18 }
```

The program is compiled and executed. The output window shows the following text:

```
C:\Users\Admin\OneDrive\Documents\Question-10.exe
The binary representation of the given decimal number is 1110000
-----
Process exited after 10.12 seconds with return value 0
Press any key to continue . . .
```

The compilation results window shows the following information:

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\OneDrive\Documents\Question-10.exe
- Output Size: 128.6015625 KiB
- Compilation Time: 0.23s
```

The status bar at the bottom indicates the current line is 11, column is 20, and the file is 378 bytes long. The system tray shows the time as 20:59 on 11-04-2023.