

Lab Report - 02 by 0432410005101088 (Saraf)

Problems for Lab Report 02:

1. Write a C program to take input of three numbers and find the largest and smallest number among them.
2. Write a C program to take input of a number and the number is positive, negative, or zero and the number is odd or even.
3. Write a C program to take input of a character and identify the input symbol is alphabet or digit or other symbol.
4. Write a C program to take input of a character and identify the character is vowel or consonant.
5. Write a C program to input any alphabet and check whether it is in between 'k' to 'o'.'
6. Write a C program to check whether a character is uppercase or lowercase alphabet.
7. Write a C program to input angles of a triangle and check whether triangle is valid or not.
8. Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:
Percentage $\geq 90\%$: Grade A
Percentage $\geq 80\%$: Grade B
Percentage $\geq 70\%$: Grade C
Percentage $\geq 60\%$: Grade D
Percentage $\geq 40\%$: Grade E
Percentage $< 40\%$: Grade F

```
01_check_three_numbers_and_find_largest_and_smallest_number.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Start here x 01_check_three_numbers_and_find_largest_and_smallest_number.c x
1 // Write a C program to take input of three numbers and find the largest and smallest number among them
2
3 #include <stdio.h>
4
5 int main()
6 {
7     int a, b, c; // the 3 numbers
8     int tmp1, tmp2; // temporary variable
9
10    scanf("%d%d%d", &a, &b, &c);
11
12    if (a > b)
13    {
14        tmp1 = a, tmp2 = b;
15    }
16    else
17    {
18        tmp1 = b, tmp2 = a;
19    }
20    if (tmp1 > c)
21    {
22        printf("Largest is = %d\nSmallest is = %d\n", tmp1, c);
23    }
24    else
25    {
26        printf("Largest is = %d\nSmallest is = %d\n", c, tmp2);
27    }
28
29    return 0;
30 }
```

Logs & others

File	Line	Message
		=== Build file: "no target" in "no project" (compiler: unknown) ===
		=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===

G:\My Drive\Varsity 2023\CSE central\UITS\Code\SPL Lab (B55 088)\Lab Report 02\la... C/C++ Windows (CR+LF) WINDOWS-1252 Line 21, Col 6, Pos 399 Insert Read/Write default

```
"G:\My Drive\Varsity 2023\CS x + v - □ x
2
1
3
Largest is = 3
Smallest is = 1

Process returned 0 (0x0) execution time : 106.619 s
Press any key to continue.
|
```

4:56 PM 3/11/2024

02_check_if_a_number_is_positive_negative_or_zero_and_the_number_is_odd_or_even.c - Code::Blocks 20.03

File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help

Start here X 02_check_if_a_number_is_positive_negative_or_zero_and_the_number_is_odd_or_even.c X

```
1 // Write a C program to take input of a number and the number is positive, negative, or zero and the number is odd or
  // even. Bing search: Is zero even number? --> Zero is an even number in mathematics, as it is an integer multiple of 21.
  // This can be easily verified based on the definition of "even".
2
3 #include <stdio.h>
4
5 int main()
6 {
7     int a;
8     scanf("%d", &a);
9
10    if (a == 0)
11    {
12        printf("The number is Zero");
13    }
14    else if (a > 0)
15    {
16        printf("The number is Positive");
17    }
18    else
19    {
20        printf("The number is Negative");
21    }
22
23    if (a % 2 == 0)
24    {
25        printf(" and it is Even\n");
26    }
27    else
28    {
29        printf(" and it is Odd\n");
30    }
31
32    return 0;
33 }
34
```

Logs & others

Code::Blocks X Search results X Cccc X Build log X Build messages X CppCheck/Vera++ X CppCheck/Vera++ messages X Cscope X Debugger X DoxyBlocks X Fortran info X

File	Line	Message
		=== Build file: "no target" in "no project" (compiler: unknown) ===
		=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===

G:\My Drive\Varsity 2023\CSE central\UITS\Code\SPL Lab (B55 088)\Lab Report 02\la... C/C++ Windows (CR+LF) WINDOWS-1252 Line 9, Col 1, Pos 374 Insert Read/Write default

"G:\My Drive\Varsity 2023\CS X + v - □ X

55
The number is Positive and it is Odd

Process returned 0 (0x0) execution time : 15.403 s
Press any key to continue.

4:57 PM
3/11/2024

03_take_a_character_and_identify_the_input_symbol_is_alphabet_or_digit_or_other_symbol.c - Code::Blocks 20.03

File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help

Start here X 03_take_a_character_and_identify_the_input_symbol_is_alphabet_or_digit_or_other_symbol.c X

```
1 // Write a C program to take input of a character and identify the input symbol is alphabet or
2 digit or other symbol
3
4 #include <stdio.h>
5
6 int main()
7 {
8     char ch;
9     scanf("%c", &ch);
10
11     if (ch >= 'A' && ch <= 'Z' || ch >= 'a' && ch <= 'z')
12     {
13         printf("the character is an Alphabet");
14     }
15     else if (ch >= '0' && ch <= '9')
16     {
17         printf("the character is a Digit");
18     }
19     /*else if (ch >= 32 && ch <= 47 || ch >= 58 && ch <= 64 || ch >= 91 && ch <= 96 || ch >= 123
20 && ch <= 126)
21     {
22         printf("the character is a Special Character");
23     }
24     */
25     else
26     {
27         printf("the character is other symbol");
28     }
29
30     return 0;
31 }
```

Logs & others

Code::Blocks X Search results X Cccc X Build log X Build messages X CppCheck/Vera++ X CppCheck/Vera++ messages X Cscope X Debugger X DoxyBlocks X Fortran info X

File	Line	Message
		=== Build file: "no target" in "no project" (compiler: unknown) ===
		=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===

G:\My Drive\Varsity 2023\CSE central\UITS\Code\SPL Lab (B55 088)\Lab Report 02\la... C/C++ Windows (CR+LF) WINDOWS-1252 Line 13, Col 6, Pos 316 Insert Read/Write default

"G:\My Drive\Varsity 2023\CS X + v - - □ X

```
%
the character is other symbol
Process returned 0 (0x0) execution time : 45.109 s
Press any key to continue.
```

4:58 PM 3/11/2024

```
O4_check_if_a_character_is_vowel_or_consonant.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Start here x O4_check_if_a_character_is_vowel_or_consonant.c x
1 // Write a C program to take input of a character and identify the
2 character is vowel or consonant.
3
4 #include <stdio.h>
5
6 int main()
7 {
8     char ch;
9     scanf("%c", &ch);
10    if (ch == 'A' || ch == 'E' || ch == 'I' || ch == 'O' || ch == 'U' || ch
11    == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u')
12    {
13        printf("The character is a vowel");
14    }
15    else if (ch >= 'A' && ch <= 'Z' || ch >= 'a' && ch <= 'z')
16    {
17        printf("The character is a consonant");
18    }
19    else
20    {
21        printf("Wrong input! The character is not an alphabet");
22    }
23    return 0;
}
```

Logs & others

Code::Blocks x Search results x Cccc x Build log x Build messages x CppCheck/Vera++ x CppCheck/Vera++ messages x Cscope x Debugger x DoxyBlocks x Fortran info x

File	Line	Message
		=== Build file: "no target" in "no project" (compiler: unknown) ===
		=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===

G:\My Drive\Varsity 2023\CSE central\UITS\Code\SPL Lab (B55 088)\Lab Report 02\la... C/C++ Windows (CR+LF) WINDOWS-1252 Line 24, Col 1, Pos 610 Insert Read/Write default

"G:\My Drive\Varsity 2023\CS x + v - □ x

```
a
The character is a vowel
Process returned 0 (0x0)    execution time : 13.303 s
Press any key to continue.
```

4:59 PM 3/11/2024

05_input_any_alphabet_and_check_whether_it_is_in_between_k_to_o.c - Code::Blocks 20.03

File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help

Start here x 05_input_any_alphabet_and_check_whether_it_is_in_between_k_to_o.c x

```
1 //Write a C program to input any alphabet and check whether it is
  in between 'k' to 'o'.
2
3 #include <stdio.h>
4
5
6 int main()
7 {
8     char ch;
9     scanf("%c", &ch);
10    if(ch>='k' && ch<='o')
11    {
12        printf("the alphabet is between 'k' and 'o'");
13    }
14    else{printf("the alphabet is NOT between 'k' and 'o'");}
15
16    return 0;
17
18
19 }
20
21
```

Logs & others

Code::Blocks x Search results x Cccc x Build log x Build messages x CppCheck/Vera++ x CppCheck/Vera++ messages x Cscope x Debugger x DoxyBlocks x Fortran info x

File	Line	Message
		=== Build file: "no target" in "no project" (compiler: unknown) ===
		=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===

G:\My Drive\Varsity 2023\CSE central\UITS\Code\SPL Lab (B55 088)\Lab Report 02\la... C/C++ Windows (CR+LF) UTF-8 Line 8, Col 13, Pos 151 Insert Read/Write default

"G:\My Drive\Varsity 2023\CS x + v - □ x

```
k
the alphabet is between 'k' and 'o'
Process returned 0 (0x0) execution time : 8.509 s
Press any key to continue.
```

4:59 PM 3/11/2024

06_check_whether_a_character_is_uppercase_or_lowercase_alphabet.c - Code::Blocks 20.03

File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help

Start here x 06_check_whether_a_character_is_uppercase_or_lowercase_alphabet.c x

```
1 //Write a C program to check whether a character is uppercase or lowercase
  alphabet.
2
3 #include <stdio.h>
4
5
6 int main()
7 {
8     char ch;
9     scanf("%c", &ch);
10    if(ch>='A' && ch<='Z')
11    {
12        printf("the alphabet is in Uppercase");
13    }
14    else if(ch>='a' && ch<='z')
15    {
16        printf("the alphabet is in Lowercase");
17    }
18    else
19    {
20        printf("Please enter a valid alphabet"); //NULL
21    }
22    return 0;
23
24
25 }
26
27
```

Logs & others

Code::Blocks x Search results x Cccc x Build log x Build messages x CppCheck/Vera++ x CppCheck/Vera++ messages x Cscope x Debugger x DoxyBlocks x Fortran info x

File	Line	Message
		=== Build file: "no target" in "no project" (compiler: unknown) ===
		=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===

G:\My Drive\Varsity 2023\CSE central\UITS\Code\SPL Lab (B55 088)\Lab Report 02\la... C/C++ Windows (CR+LF) WINDOWS-1252 Line 16, Col 48, Pos 342 Insert Read/Write default

"G:\My Drive\Varsity 2023\CS x + v - □ x

```
g
the alphabet is in Lowercase
Process returned 0 (0x0)   execution time : 11.702 s
Press any key to continue.
```

5:00 PM 3/11/2024

```
07_input_angles_of_a_triangle_and_check_whether_triangle_is_valid_or_not.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Start here x 07_input_angles_of_a_triangle_and_check_whether_triangle_is_valid_or_not.c x
1 //Write a C program to input angles of a triangle and check whether
2 triangle is valid or not
3 #include <stdio.h>
4
5
6 int main()
7 {
8     float a,b,c; //can take int as well
9     scanf("%f %f %f", &a,&b,&c);
10    if(a+b+c==180 && a!=0 && b!=0 && c!=0 )
11    {
12        {printf("Triangle is valid");}
13    }
14    else
15    {
16        printf("Triangle is NOT valid");
17    }
18
19    return 0;
20
21
22 }
23

Logs & others
Code::Blocks x Search results x Cccc x Build log x Build messages x CppCheck/Vera++ x CppCheck/Vera++ messages x Cscope x Debugger x DoxyBlocks x Fortran info x
File Line Message
=== Build file: "no target" in "no project" (compiler: unknown) ===
=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===
```

```
"G:\My Drive\Varsity 2023\CS x + v - □ x
95
25
60
Triangle is valid
Process returned 0 (0x0) execution time : 14.132 s
Press any key to continue.
```



```
08_input_marks_of_five_subjects_and_Calculate_percentage_and_grade.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Start here X 08_input_marks_of_five_subjects_and_Calculate_percentage_and_grade.c X
1  /*
2  Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to
   following:
3
4  Percentage >= 90%: Grade A
5  Percentage >= 80%: Grade B
6  Percentage >= 70%: Grade C
7  Percentage >= 60%: Grade D
8  Percentage >= 40%: Grade E
9  Percentage < 40%: Grade F
10 */
11
12 #include <stdio.h>
13
14 int main()
15 {
16     int a,b,c,d,e;
17     int avg;
18     printf("Input marks out of 100 for,\nPhysics: ");
19     scanf("%d",&a);
20     printf("Chemistry: ");
21     scanf("%d",&b);
22     printf("Biology: ");
23     scanf("%d",&c);
24     printf("Mathematics: ");
25     scanf("%d",&d);
26     printf("Computer: ");
27     scanf("%d",&e);
28
29     avg = (a+b+c+d+e)/5;
30
31     printf("Your marks average is %d percent\n", avg);
32
33     if(avg >= 90){printf("You got Grade A");}
34     else if(avg >= 80){printf("You got Grade B");}
35     else if(avg >= 70){printf("You got Grade C");}
36     else if(avg >= 60){printf("You got Grade D");}
37     else if(avg >= 40){printf("You got Grade E");}
38     else if(avg < 40){printf("You got Grade F");}
39
40     return 0;
41 }
42
43
Logs & others
Code::Blocks X Search results X Cccc X Build log X Build messages X CppCheck/Vera++ X CppCheck/Vera++ messages X Cscope X Debugger X DoxyBlocks X Fortran info X
File Line Message
=== Build file: "no target" in "no project" (compiler: unknown) ===
=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===
G:\My Drive\Varsity 2023\CSE central\UITS\Code\SPL Lab (B55 088)\Lab Report 02\la... C/C++ Windows (CR+LF) WINDOWS-1252 Line 1, Col 1, Pos 0 Insert Read/Write default
```

```
"G:\My Drive\Varsity 2023\CS X + v
Input marks out of 100 for,
Physics: 86
Chemistry: 89
Biology: 82
Mathematics: 95
Computer: 99
Your marks average is 90 percent
You got Grade A
Process returned 0 (0x0) execution time : 24.050 s
Press any key to continue.
|
```