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Question1

The screenshot shows the Dev-C++ IDE with a C program open. The program prompts the user to enter a number and checks if it is a multiple of 3. The output window shows the user entered 21, and the program correctly identifies it as a multiple of 3. The compilation results show no errors or warnings.

```
#include<stdio.h>
main()
{
    int number,modint;

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

    modint=number%3;

    if(modint==0)
        printf("\n%d is multiple of 3.\n",number);
    else
        printf("\n%d is not a multiple of 3.\n",number);
}
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\Desktop\PF Lab\PF LAB 5\q1.exe
- Output Size: 128.6015625 KiB
- Compilation Time: 0.31s

Question 2

The screenshot shows the Dev-C++ IDE with a C program open. The program prompts the user to enter the time and checks if it is morning, evening, or night. The output window shows the user entered 15, and the program correctly identifies it as evening. The compilation results show no errors or warnings.

```
#include<stdio.h>
main()
{
    int t;
    printf("Enter the time: ");
    scanf("%d", &t);

    if(t>=5 && t<=11)
        printf("\nGood Morning\n");
    else if(t>=12 && t<=18)
        printf("\nGood Evening\n");
    else
        printf("\nGood Night\n");
}
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\Desktop\PF Lab\PF LAB 5\q2.exe
- Output Size: 128.2705078125 KiB
- Compilation Time: 0.33s

Question3

The screenshot shows the Dev-C++ IDE with the file `q3.c` open. The code is as follows:

```
1 #include<stdio.h>
2
3 main()
4 {
5     char choice;
6
7     printf("Would you like to continue (Y/N)? ");
8     scanf("%c", &choice);
9
10    switch(choice){
11
12        case 'Y':
13            printf("\nSuccessfully deleted.\n");
14            break;
15        case 'y':
16            printf("\nSuccessfully deleted.\n");
17            break;
18        case 'N':
19            printf("\nDelete Cancelled.\n");
20            break;
21        case 'n':
22            printf("\nDelete Cancelled.\n");
23            break;
24        default:
25            printf("Invalid input.");
26    }
27 }
28
```

The output window shows the following text:

```
C:\Users\Admin\Desktop\PF Lab 5\q3.exe
Would you like to continue (Y/N)? y
Successfully deleted.
-----
Process exited after 4.137 seconds with return value 0
Press any key to continue . . .
```

The compilation results show 0 errors and 0 warnings. The output filename is `C:\Users\Admin\Desktop\PF Lab 5\q3.exe` and the output size is 128,770,507,8125 KiB. The compilation time is 0.30s.

Question 4

The screenshot shows the Dev-C++ IDE with the file `q4.c` open. The code is as follows:

```
1 #include<stdio.h>
2
3 main()
4 {
5     char operation;
6     float x,y,ans;
7
8     printf("Enter the operation you want to use:\n");
9     scanf("%c",&operation);
10    printf("Enter two numbers:\n");
11    scanf("%f %f",&x,&y);
12    switch(operation){
13
14        case '+':
15            ans = x + y;
16            break;
17        case '-':
18            ans = x - y;
19            break;
20        case '*':
21            ans = x * y;
22            break;
23        case '/':
24            ans = x / y;
25            break;
26        default: printf("operator doesnt match");
27    }
28    printf("Result: %.2f",ans);
29 }
30
```

The output window shows the following text:

```
C:\Users\Admin\Desktop\PF Lab 5\q4.exe
Enter the operation you want to use:
+
Enter two numbers:
0
6
Result: 54.00
-----
Process exited after 3.234 seconds with return value 13
Press any key to continue . . .
```

The compilation results show 0 errors and 0 warnings. The output filename is `C:\Users\Admin\Desktop\PF Lab 5\q4.exe` and the output size is 133,039,0625 KiB. The compilation time is 0.30s.

Question 5

The screenshot shows a C++ IDE with a source file named `q5.c`. The code defines a `main` function that prompts the user to "Enter any character + Special character...". It reads a character `ch` and uses a series of `if` statements to check its category: lowercase letters ('a'-'z'), uppercase letters ('A'-'Z'), digits ('0'-'9'), and special characters. The program outputs the appropriate message and then exits with a return value of 20. The output window shows the user input '+' and the program's response.

```
1 #include <stdio.h>
2 int main()
3 {
4     char ch;
5     printf("Enter any character +\n");
6     scanf("%c", &ch);
7     if (ch >= 'a' && ch <= 'z')
8     {
9         printf("Small Alphabet...\n");
10    }
11    else if (ch >= 'A' && ch <= 'Z')
12    {
13        printf("Large Alphabet...\n");
14    }
15    else if (ch >= '0' && ch <= '9')
16    {
17        printf("Its a Digit...\n");
18    }
19    else
20    {
21        printf("Special character...\n");
22    }
23 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\Documents\q5.exe
- Output Size: 128.6015625 KiB
- Compilation Time: 0.33s

Process exited after 5.306 seconds with return value 20
Press any key to continue . . .

Question 6

The screenshot shows a C++ IDE with a source file named `q6.c`. The code defines a `main` function that prompts the user to "enter three value..". It reads three integers `x`, `y`, and `z`, and then uses `if` statements to compare them. The program outputs the result of the comparison and then exits with a return value of 74. The output window shows the user input '1 2 3' and the program's response.

```
1 #include <stdio.h>
2 int main()
3 {
4     int x,y,z;
5     printf("enter three value..\n");
6     scanf("%d %d %d", &x, &y, &z);
7     if ((x>y)&&(y>z))
8     {
9         printf("first num %d is greater than second %d and third num %d is less than second %d", x,y,z,y);
10    }
11    else if ((z>y)&&(z>x))
12    {
13        printf("third num %d is greater than second %d and first num %d is less than second %d", z,y,x,y);
14    }
15    else
16    {
17        printf("second num %d is greater than first %d and third num %d", y,x,z);
18    }
19 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\Documents\q6.exe
- Output Size: 128.6015625 KiB
- Compilation Time: 0.33s

Process exited after 3.43 seconds with return value 74
Press any key to continue . . .

Question 7

```
#include<stdio.h>
main()
{
    float cost, disc, sellcost, am_saved;
    printf("Enter cost of the item. ");
    scanf("%f",&cost);
    if (cost>2000 && cost<=4000){
        disc = cost * 0.2;
        sellcost = cost - disc;
        am_saved = cost - sellcost;
    }
    else if (cost>4000 && cost<=6000){
        disc = cost * 0.3;
        sellcost = cost - disc;
        am_saved = cost - sellcost;
    }
    else if (cost>6000){
        disc = cost * 0.5;
        sellcost = cost - disc;
        am_saved = cost - sellcost;
    }
    else{
        printf("No discount available...");
    }
    printf(" Marked price: %0.2f\n Selling Price: %0.2f\n Amount saved: %0.2f\n",cost,sellcost,am_saved);
}
```

Enter cost of the item. 5000
Marked price: 5000.00
Selling Price: 3500.00
Amount saved: 1500.00

Process exited after 1.866 seconds with return value 70
Press any key to continue . . .

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\Desktop\PF Lab\PF LAB 5\q7.exe
- Output Size: 128.6015625 KiB
- Compilation Time: 0.30s

Question 8

```
#include<stdio.h>
main ()
{
    int bright;
    printf("Enter the brightness. ");
    scanf("%d",&bright);
    if(bright > 500 && bright<=1000)
        printf("\nexposed under the sunshine...\n");
    else if(bright > 100 && bright<=500)
        printf("\nlightning...\n");
    else if(bright >=0 && bright<=100)
        printf("\nits evening...\n");
    else
        printf("\nInvalid input\n");
}
```

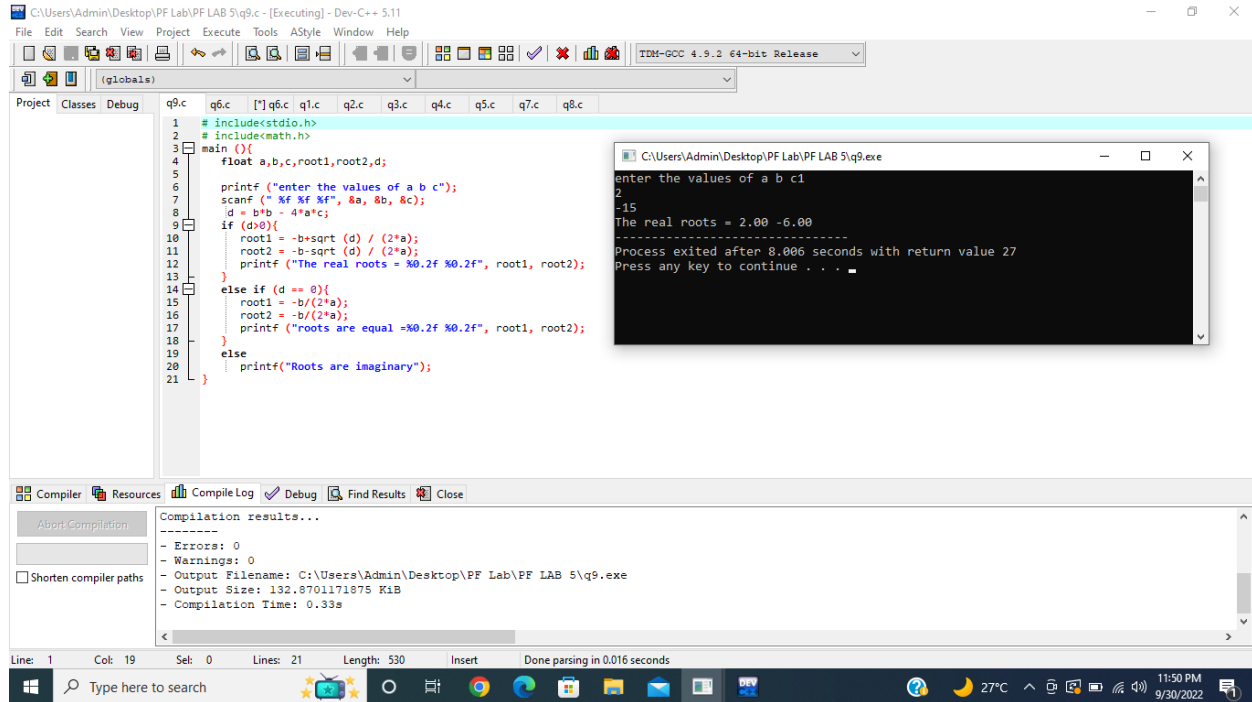
Enter the brightness. 400
lightning...

Process exited after 2.125 seconds with return value 0
Press any key to continue . . .

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\Desktop\PF Lab\PF LAB 5\q8.exe
- Output Size: 128.7705078125 KiB
- Compilation Time: 0.45s

Question 9



The screenshot shows the Dev-C++ IDE with a C program for finding the roots of a quadratic equation. The program is compiled and executed, showing the output in a console window.

Source Code (q9.c):

```
1 #include<stdio.h>
2 #include<math.h>
3 main()
4 {
5     float a,b,c,root1,root2,d;
6
7     printf("enter the values of a b c");
8     scanf("%f %f %f", &a, &b, &c);
9     d = b*b - 4*a*c;
10    if (d>0){
11        root1 = -b+sqrt(d) / (2*a);
12        root2 = -b-sqrt(d) / (2*a);
13        printf("The real roots = %0.2f %0.2f", root1, root2);
14    }
15    else if (d == 0){
16        root1 = -b/(2*a);
17        root2 = -b/(2*a);
18        printf("roots are equal =%0.2f %0.2f", root1, root2);
19    }
20    else
21        printf("Roots are imaginary");
22 }
```

Compilation Results:

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Admin\Desktop\PF Lab\PF LAB 5\q9.exe
- Output Size: 132.8701171875 KiB
- Compilation Time: 0.33s
```

Console Output:

```
C:\Users\Admin\Desktop\PF Lab\PF LAB 5\q9.exe
enter the values of a b c
2
-15
The real roots = 2.00 -6.00
.....
Process exited after 8.006 seconds with return value 27
Press any key to continue . . .
```

