



```
1 // Program to sum all integers from 1 to 100 using while loop.
2 #include <stdio.h>
3 int main()
4 {
5     int sum = 0, i = 1;
6     while (i <= 100)
7     {
8         sum += i;
9         i++;
10    }
11    printf("Sum is %d", sum);
12    return 0;
13 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS E:\Manish\CProgramming\assignment12> ./question1
Sum is 5050
```

```
● PS E:\Manish\CProgramming\assignment12> █
```



```
1 // Program to find the sum and average of the mark of five subjects using while loop.
2 #include <stdio.h>
3 int main()
4 {
5     int marks, total, i;
6     float average;
7     total = 0;
8     i = 1;
9     while (i <= 5)
10    {
11        printf("Enter marks in %d subject: ", i);
12        scanf("%d", &marks);
13        total += marks;
14        i++;
15    }
16    average = (float)total / 5;
17    printf("The sum = %d\t and average of marks of five subjects is: %f", total, average);
18    return 0;
19 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS E:\Manish\CProgramming\assignment12> ./question2

Enter marks in 1 subject: 88

Enter marks in 2 subject: 67

Enter marks in 3 subject: 80

Enter marks in 4 subject: 94

Enter marks in 5 subject: 55

The sum = 384 and average of marks of five subjects is: 76.800003

PS E:\Manish\CProgramming\assignment12> █



```
1 // Program to find the sum of digits of any num supplied by the user.
2 #include <stdio.h>
3 int main()
4 {
5     int num, sum = 0, rem;
6     printf("Enter any number: ");
7     scanf("%d", &num);
8     while (num > 0)
9     {
10         rem = num % 10; // Get the last digit
11         sum += rem;      // Add it to sum
12         num /= 10;       // Remove the last digit
13     }
14     printf("Sum of digits = %d", sum);
15     return 0;
16 }
```

PROBLEMS OUTPUT TERMINAL PORTS CODEWHISPERER REFERENCE LOG COMMENTS DEBUG CONSOLE

```
> ./question3
Enter any number: 5678
Sum of digits = 26
```

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```

1 // Program to check whether a given number is an Armstrong number.
2 // An armstrong number is a number which equal to the sum of the cubes of its individual digits.
3 #include <stdio.h>
4
5 int main()
6 {
7     int num, digit, sum = 0, originalNum;
8
9     // Input from the user
10    printf("Enter a number to check whether it is an Armstrong number: ");
11    scanf("%d", &num);
12    originalNum = num;
13
14    // Calculate the sum of digits raised to the power of the number of digits
15    while (num > 0)
16    {
17        digit = num % 10;
18        sum += digit * digit * digit;
19        num /= 10;
20    }
21
22    // Check if it's an Armstrong number and display the result
23    if (originalNum == sum)
24    {
25        printf("The number is an Armstrong number.");
26    }
27    else
28    {
29        printf("The number is not an Armstrong number.");
30    }
31
32    return 0;
33 }
34

```

PROBLEMS OUTPUT TERMINAL PORTS CODEWHISPERER REFERENCE LOG COMMENTS DEBUG CONSOLE

```

> ./question4
Enter a number to check whether it is Armstrong or not: 8564
The number is not Armstrong%
> ./question4
Enter a number to check whether it is Armstrong or not: 153
The number is Armstrong%
> ./question4
Enter a number to check whether it is Armstrong or not: -123
The number is not Armstrong%

```



```
1 // Program to read a number and find and display its reverse
2 #include <stdio.h>
3 int main()
4 {
5     int num, reverse = 0, remainder;
6     printf("Enter a number to reverse: ");
7     scanf("%d", &num);
8     while (num != 0)
9     {
10         remainder = num % 10;
11         reverse = reverse * 10 + remainder;
12         num /= 10;
13     }
14     printf("Reversed number: %d", reverse);
15     return 0;
16 }
```

PROBLEMS OUTPUT TERMINAL PORTS CODEWHISPERER REFERENCE LOG COMMENTS DEBUG CONSOLE

```
> ./question5
Enter a number to reverse: 345
Reversed number: 543%
> ./question5
Enter a number to reverse: 649
Reversed number: 946%
```

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```
1 // Program to read a number from keyboard and check whether it is a palindrome or not
2 #include <stdio.h>
3 int main()
4 {
5     int num, rev = 0, rem, originalNum;
6     printf("Enter a number to check whether it is a palindrome or not: ");
7     scanf("%d", &num);
8     originalNum = num;
9     while (num != 0)
10    {
11        rem = num % 10;
12        rev = rev * 10 + rem;
13        num /= 10;
14    }
15    if (originalNum == rev)
16    {
17        printf("The number is a palindrome");
18    }
19    else
20    {
21        printf("The number is not a palindrome");
22    }
23    return 0;
24 }
```

PROBLEMS OUTPUT TERMINAL PORTS CODEWHISPERER REFERENCE LOG COMMENTS DEBUG CONSOLE

```
> ./question6
Enter a number to check whether it is a palindrome or not: 7654
The number is not a palindrome%
> ./question6
Enter a number to check whether it is a palindrome or not: 54345
The number is a palindrome%
```

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```
1 // Program to print out all numbers from 1 to 10 using for do-while loop
2 #include <stdio.h>
3 int main()
4 {
5     int x = 1;
6     do
7     {
8         printf("%d\n", x);
9         x++;
10    } while (x <= 10);
11    return 0;
12 }
```

PROBLEMS OUTPUT TERMINAL PORTS CODEWHISPERER REFERENCE LOG COMMENTS DEBUG CONSOLE

> ./question8

1
2
3
4
5
6
7
8
9
10

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```
1 // Program to convert decimal number into binary
2 #include <stdio.h>
3
4 int main() {
5     int decimalNumber, remainder, binary = 0, base = 1;
6
7     printf("Enter a decimal number: ");
8     scanf("%d", &decimalNumber);
9
10    while (decimalNumber > 0) {
11        remainder = decimalNumber % 2;    // Get the remainder when dividing by 2
12        binary = binary + remainder * base;
13        decimalNumber = decimalNumber / 2; // Update decimal number
14        base = base * 10;
15    }
16
17    printf("The binary equivalent is: %d\n", binary);
18
19    return 0;
20 }
21
```

```
PROBLEMS  OUTPUT  TERMINAL  PORTS  CODEWHISPERER REFERENCE LOG  COMMENTS  DEBUG CONSOLE
> ./question7
Enter a decimal number: 56
The binary equivalent is: 111000
> ./question7
Enter a decimal number: 50
The binary equivalent is: 110010

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```
1 // Program to find the Fibonacci sequence 1, 1, 2, 3, 5, 8, 13, 21, 34, ...
2 #include <stdio.h>
3 int main()
4 {
5     int fib1, fib2, prev, next, num;
6     fib1 = 1;
7     fib2 = 1;
8     prev = fib1;
9     printf("Enter number upto which you want fibonacci series: ");
10    scanf("%d", &num);
11    printf("%d", fib1);
12    do
13    {
14        next = fib2 + prev;
15        prev = fib2;
16        fib2 = next;
17        printf(",%d", prev);
18    } while (num > next);
19    return 0;
20 }
```

PROBLEMS OUTPUT TERMINAL PORTS CODEWHISPERER REFERENCE LOG COMMENTS DEBUG CONSOLE

```
> ./question9
Enter number upto which you want fibonacci series: 25
1,1,2,3,5,8,13,21%
> ./question9
Enter number upto which you want fibonacci series: 550
1,1,2,3,5,8,13,21,34,55,89,144,233,377%
```

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