**1**

# C Input Output (I/O)

```c
#include <stdio.h>
int main()
{
    int testInteger = 5;
    printf("Number = %d", testInteger);
    return 0;
}


#include <stdio.h>
int main()
{
    float number1 = 13.5;
    double number2 = 12.4;

    printf("number1 = %f\n", number1);
    printf("number2 = %lf", number2);
    return 0;
}


#include <stdio.h>
int main()
{
    char chr = 'a';
    printf("character = %c", chr);
    return 0;
}
```

## C Input

In C programming, `scanf()` is one of the commonly used function to take input from the user. The `scanf()` function reads formatted input from the standard input such as keyboards.

```c
#include <stdio.h>
int main()
{
    int testInteger;
    printf("Enter an integer: ");
    scanf("%d", &testInteger);
    printf("Number = %d",testInteger);
    return 0;
}
```

**Example of float and double input and output**

```c
#include <stdio.h>
int main()
{
    float num1;
```

```c
    double num2;

    printf("Enter a number: ");
    scanf("%f", &num1);
    printf("Enter another number: ");
    scanf("%lf", &num2);

    printf("num1 = %f\n", num1);
    printf("num2 = %lf", num2);

    return 0;
}
```

**Character I/O**

```c
#include <stdio.h>
int main()
{
    char chr;
    printf("Enter a character: ");
    scanf("%c",&chr);
    printf("You entered %c.", chr);
    return 0;
}
```

**ASCII I/O**

```c
#include <stdio.h>
int main()
{
    char chr;
    printf("Enter a character: ");
    scanf("%c", &chr);

    // When %c is used, a character is displayed
    printf("You entered %c.\n",chr);

    // When %d is used, ASCII value is displayed
    printf("ASCII value is %d.", chr);
    return 0;
}
```

## I/O Multiple Values

**Here's how you can take multiple inputs from the user and display them.**

```c
#include <stdio.h>
int main()
{
    int a;
    float b;

    printf("Enter integer and then a float: ");

    // Taking multiple inputs
```

```
        scanf("%d%f", &a, &b);

        printf("You entered %d and %f", a, b);
        return 0;
}
```

2
```c
#include <stdio.h>
#include <conio.h>

void main()
{
    int a;
    printf("Enter an integer\n");
    scanf("%d", &a);
    printf("Integer that you have entered is %d\n", a);
}

/**********************************************
Output -
Enter an integer
2
Integer that you have entered is 2
**********************************************/
```

3
```c
#include <stdio.h>

int main()
{
    int number;

    printf( "Please enter a number: " );
    scanf( "%d", &number);
    printf( "You entered %d", number );

    return 0;
}

/*
Output

Run1 -
Please enter a number: 10
You entered 10

Run2 -
Please enter a number: 20
You entered 20
*/
```

4
```c
#include <stdio.h>

void main()
```

```c
{
    int a, b, c;
    printf("Enter two numbers to add\n");
    scanf("%d%d",&a,&b);
    c = a + b;
    printf("Sum of entered numbers = %d\n",c);

}

/**********************************************
Output -
Enter two numbers to add
2
3
Sum of entered numbers = 5
**********************************************/
```

| 5 | ```c
//Float and Double Input/Output
#include <stdio.h>
int main()
{
    float num1;
    double num2;

    printf("Enter a number: ");
    scanf("%f", &num1);
    printf("Enter another number: ");
    scanf("%lf", &num2);

    printf("num1 = %f\n", num1);
    printf("num2 = %lf", num2);

    return 0;
}
``` |
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