Advance Coding

Week 1

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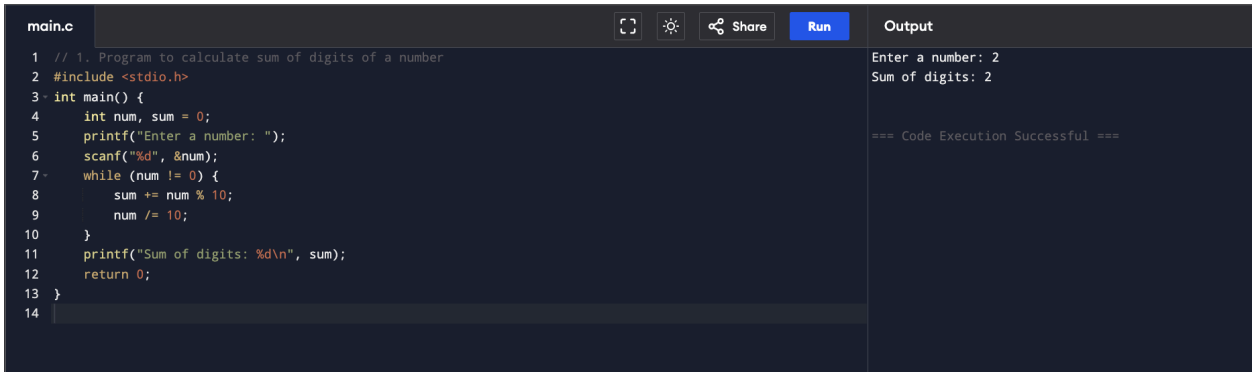
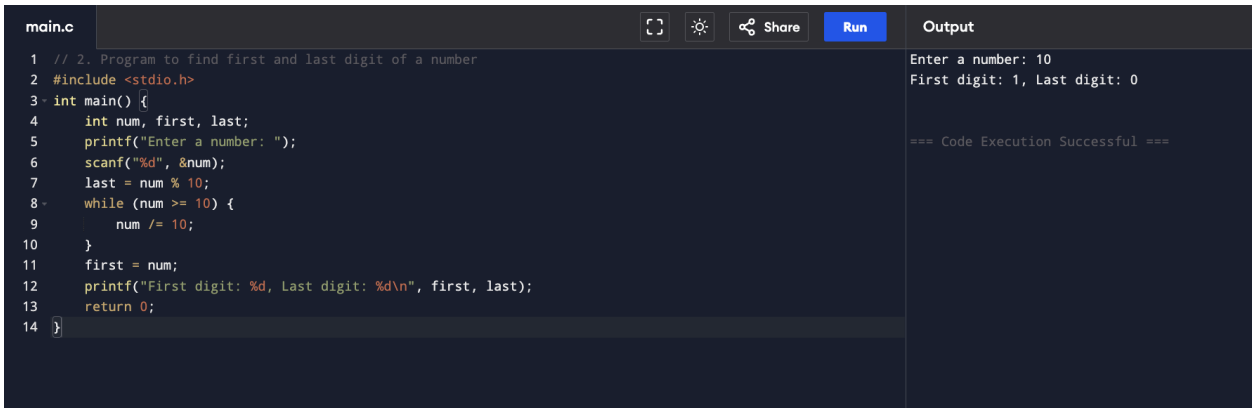
1. Program to calculate sum of digits of a number

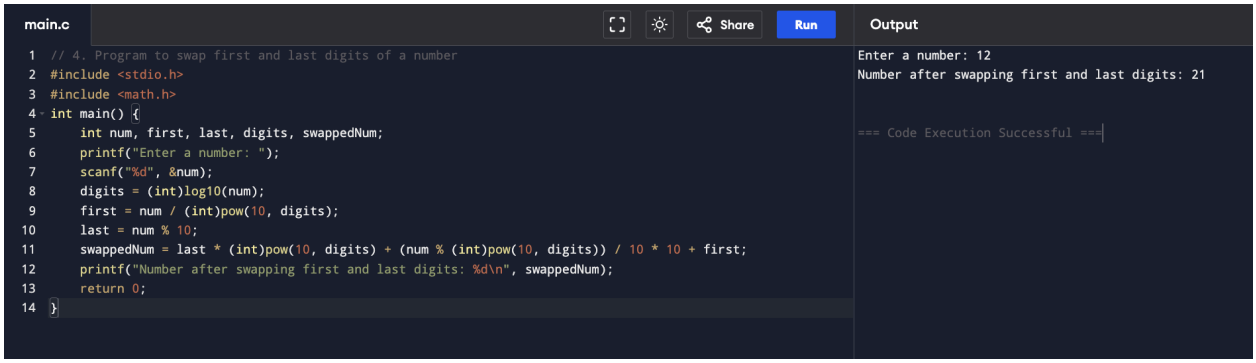


2. Program to find first and last digit of a number

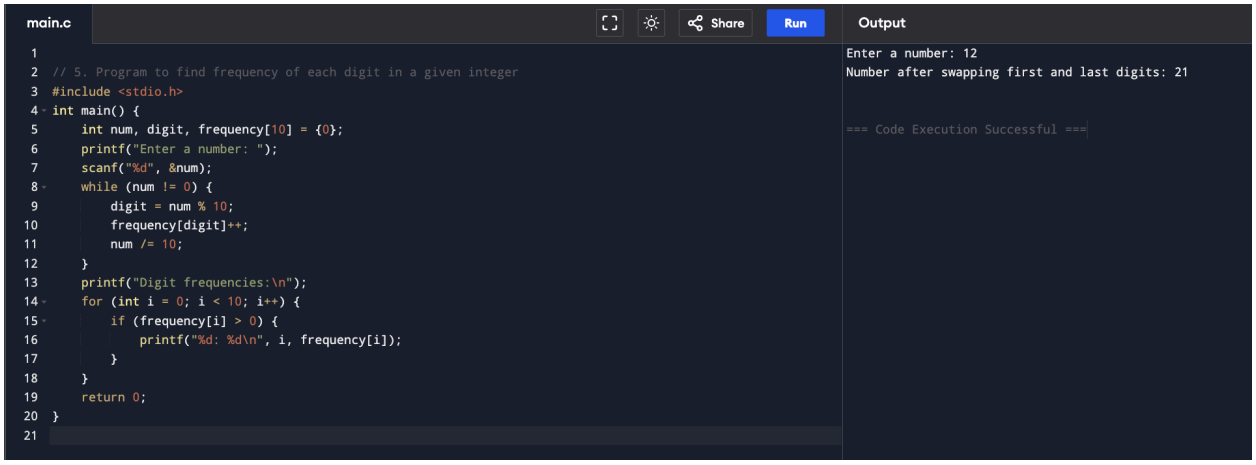


3. Program to find sum of first and last digit of a number

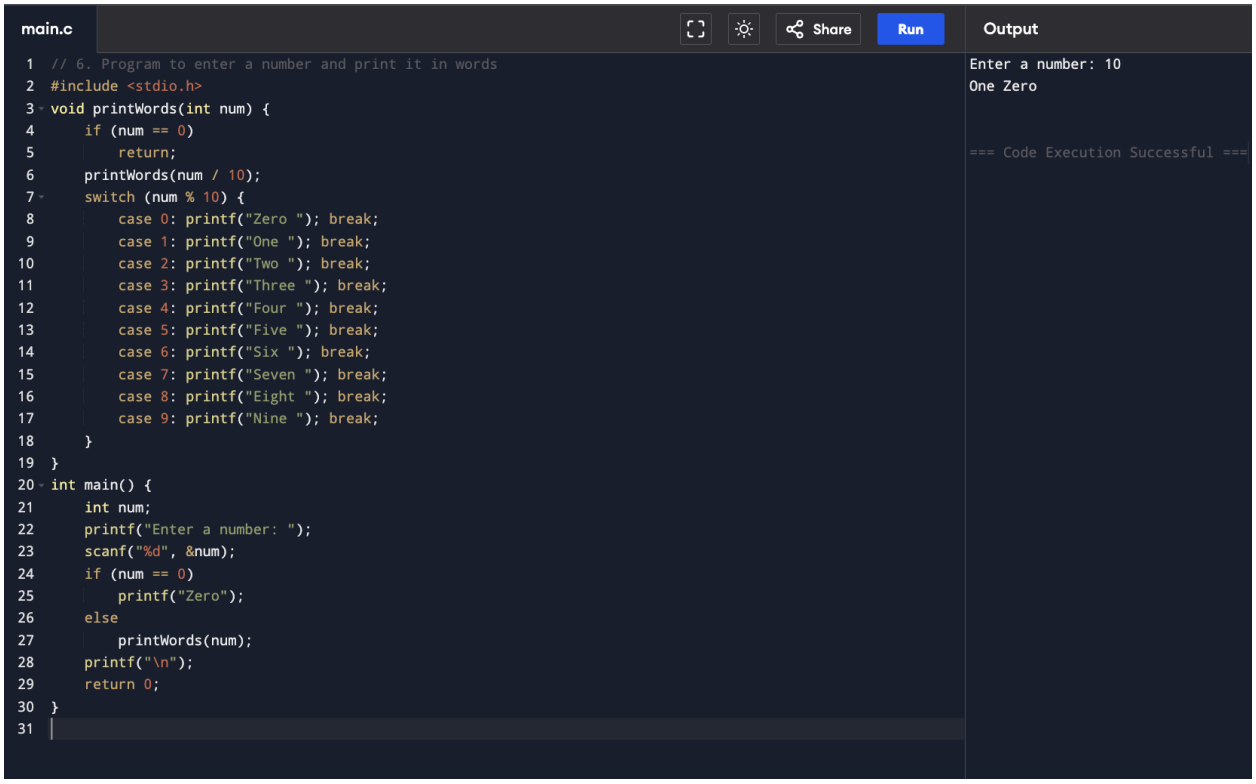
4. Program to swap first and last digits of a number



5. Program to find frequency of each digit in a given integer



6. Program to enter a number and print it in words



7. Program to find one’s complement of a binary number

main.c

Share Run

```c
// 7. Program to find one's complement of a binary number
#include <stdio.h>
#include <string.h>
int main() {
    char binary[32];
    printf("Enter a binary number: ");
    scanf("%s", binary);
    printf("One's complement: ");
    for (int i = 0; binary[i] != '\0'; i++) {
        printf("%c", binary[i] == '0' ? '1' : '0');
    }
    printf("\n");
    return 0;
}
```

Output

```
Enter a binary number: 1010
One's complement: 0101


=== Code Execution Successful ===
```

8. Program to find two's complement of a binary number

main.c

Share Run

```c
// 8. Program to find two's complement of a binary number
#include <stdio.h>
#include <string.h>
int main() {
    char binary[32], ones[32];
    int len, carry = 1;
    printf("Enter a binary number: ");
    scanf("%s", binary);
    len = strlen(binary);
    for (int i = 0; i < len; i++) {
        ones[i] = binary[i] == '0' ? '1' : '0';
    }
    ones[len] = '\0';
    for (int i = len - 1; i >= 0; i--) {
        if (ones[i] == '1' && carry == 1) {
            ones[i] = '0';
        } else if (carry == 1) {
            ones[i] = '1';
            carry = 0;
        }
    }
    printf("Two's complement: %s\n", ones);
    return 0;
}
```

Output

```
Enter a binary number: 101010
Two's complement: 010110


=== Code Execution Successful ===
```

9. Program to convert Decimal to Hexadecimal number system

main.c

```c
// 9. Program to convert Decimal to Hexadecimal number system
#include <stdio.h>
int main() {
    int num;
    printf("Enter a decimal number: ");
    scanf("%d", &num);
    printf("Hexadecimal: %X\n", num);
    return 0;
}
```

input

```
Enter a decimal number: 12424323
Hexadecimal: BD9483


...Program finished with exit code 0
Press ENTER to exit console.
```