



## Assignment (4)

1. Write a program to read 100 numbers and add positive numbers and negative numbers separately.

```
#include <stdio.h>

int main() {
    int numbers[100];
    int positiveSum = 0;
    int negativeSum = 0;
    int i;

    // Read 100 numbers from the user
    printf("Enter 100 numbers:\n");
    for (i = 0; i < 100; i++) {
        scanf("%d", &numbers[i]);
    }

    // Calculate the sum of positive and negative numbers
    for (i = 0; i < 100; i++) {
        if (numbers[i] > 0) {
            positiveSum += numbers[i];
        } else if (numbers[i] < 0) {
            negativeSum += numbers[i];
        }
        //If the number is zero, we do not add it to any sum.
    }

    // Print the results
    printf("Sum of positive numbers: %d\n", positiveSum);
    printf("Sum of negative numbers: %d\n", negativeSum);

    return 0;
}
```

2. Write a program to read 10 numbers and print the maximum number

```
#include <stdio.h>

int main() {
    int numbers[10];
    int max, i;

    // Read 10 numbers from the user
    printf("Enter 10 numbers:\n");
    for (i = 0; i < 10; i++) {
        scanf("%d", &numbers[i]);
    }

    // Initialize max with the first number
    max = numbers[0];

    // Find the maximum number
    for (i = 1; i < 10; i++) {
        if (numbers[i] > max) {
            max = numbers[i];
        }
    }

    // Print the maximum number
    printf("The maximum number is: %d\n", max);

    return 0;
}
```

3. Write a program to calculate factorial .

```
#include <stdio.h>

int main() {
    int n, i;
    unsigned long long factorial = 1; // Use unsigned long long for larger factorials

    printf("Enter a non-negative integer: ");
    scanf("%d", &n);

    if (n < 0) {
        printf("Factorial is not defined for negative numbers.\n");
    } else {
        for (i = 1; i <= n; i++) {
            factorial *= i;
        }
        printf("Factorial of %d = %llu\n", n, factorial);
    }

    return 0;
}
```

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