ASSIGNMENT 3

SIMPLE CALCULATOR

```
#include <stdio.h>
#include <math.h>

void addition() {
   double a, b;
   printf("Enter two numbers to add: ");
   scanf("%lf %lf", &a, &b);
   printf("Result: %.2lf\n", a + b);
}

void subtraction() {
   double a, b;
   printf("Enter two numbers to subtract (a - b): ");
   scanf("%lf %lf", &a, &b);
   printf("Result: %.2lf\n", a - b);
}

void multiplication() {
   double a, b;
   printf("Enter two numbers to multiply: ");
   scanf("%lf %lf", &a, &b);
   printf("Result: %.2lf\n", a * b);
}

void division() {
   double a, b;
   printf("Enter two numbers to divide (a / b): ");
```

```
    scanf("%lf %lf", &a, &b);
    if (b != 0) {
        printf("Result: %.2lf\n", a / b);
    } else {
        printf("Error: Division by zero is not allowed.\n");
    }
}

void logarithm() {
    double a;
    printf("Enter a number to find its natural logarithm (ln):
");
    scanf("%lf", &a);
    if (a > 0) {
        printf("Result: %.2lf\n", log(a));
    } else {
        printf("Error: Logarithm of non-positive numbers is not
defined.\n");
    }
}

void square_root() {
    double a;
    printf("Enter a number to find its square root: ");
    scanf("%lf", &a);
    if (a >= 0) {
        printf("Result: %.2lf\n", sqrt(a));
    } else {
        printf("Error: Square root of negative numbers is not
defined.\n");
    }
```

```
}

int main() {
    int choice;

    do {
        printf("\n--- Simple Calculator ---\n");
        printf("1. Addition\n");
        printf("2. Subtraction\n");
        printf("3. Multiplication\n");
        printf("4. Division\n");
        printf("5. Logarithmic values (ln)\n");
        printf("6. Square roots\n");
        printf("7. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
            case 1: addition(); break;
            case 2: subtraction(); break;
            case 3: multiplication(); break;
            case 4: division(); break;
            case 5: logarithm(); break;
            case 6: square_root(); break;
            case 7: printf("Exiting...\n"); break;
            default: printf("Invalid choice. Please try again.\n");
        }
    } while (choice != 7);

    return 0;
}
```