Q.1 Write a menu-driven program to implement arithmetic operations such as +, -, *, /, and % using UDF, switch case, and looping. Make sure that the program is endless until a certain letter is pressed.

For example,

Output:

Press 1 for +
Press 2 for -
Press 3 for *
Press 4 for /
Press 5 for %
Press 0 for the exit

Enter your choice: 1
Enter the first number: 5
Enter the second number: 3
Addition of 5 and 3 is 8

Press 1 for +
Press 2 for -
Press 3 for *
Press 4 for /
Press 5 for %
Press 0 for the exit

Enter your choice: 4
Enter the first number: 10
Enter the second number: 5
Division of 10 and 5 is 2

Press 1 for +
Press 2 for -
Press 3 for *
Press 4 for /
Press 5 for %
Press 0 for the exit

Enter your choice: 0

Ans:

```
// Online C compiler to run C program online
#include <stdio.h>
#include<string.h>
void add(int a, int b);
```

```
void subtract(int a, int b);
void multiply(int a, int b);
void divide(int a, int b);
void modulus(int a, int b);
int main() {
   int choice;
   int a, b;
   while (1) {
      printf("Press 1 for +\n");
      printf("Press 2 for -\n");
      printf ("Press 3 for *\n");
      printf("Press 4 for /\n");
      printf("Press 5 for %\n");
      printf("Press 0 for exit\n");
      printf("Enter your choice: ");
      scanf("%d", &choice);
      if (choice == 0)
         break;
      printf("Enter the first number: ");
      scanf("%d", &a);
      printf("Enter the second number: ");
      scanf("%d", &b);
      switch (choice) {
         case 1:
            add(a, b);
            break;
         case 2:
            subtract(a, b);
            break;
         case 3:
            multiply(a, b);
            break;
         case 4:
            divide(a, b);
            break;
         case 5:
            modulus(a, b);
            break;
         default:
            printf("Invalid choice\n");
      }
   }
   return 0;
}
```

```
void add(int a, int b) {
   printf("Addition of %d and %d is %d\n", a, b, a + b);
}
void subtract(int a, int b) {
   printf("Subtraction of %d and %d is %d\n", a, b, a - b);
}
void multiply(int a, int b) {
   printf("Multiplication of %d and %d is %d\n", a, b, a * b);
}
void divide(int a, int b) {
   if (b != 0)
      printf("Division of %d and %d is %f\n", a, b, (float)a / b);
   else
      printf("invalid!\n");
}
void modulus(int a, int b) {
   if (b != 0)
      printf("Modulus of %d and %d is %d\n", a, b, a % b);
   else
      printf("invalid!\n");
}
```

o/p:

```
Press 1 for +
Press 2 for -
Press 3 for *
Press 4 for /
Press 5 for %
Press 0 for exit
Enter your choice: 1
Enter the first number: 5
Enter the second number: 3
Addition of 5 and 3 is 8
Press 1 for +
Press 2 for -
Press 3 for *
Press 4 for /
Press 5 for %
Press 0 for exit
Enter your choice: 4
Enter the first number: 10
Enter the second number: 5
Division of 10 and 5 is 2.000000
```

Press 1 for +
Press 2 for -
Press 3 for *
Press 4 for /
Press 5 for %
Press 0 for exit
Enter your choice: 0

=== Code Execution Successful ===