Tutorial 05

## Switch case

```c
#include <stdio.h>

int main () {

    float num1, num2;
    int choice;

    printf("Enter two numbers: ");
    scanf("%f %f", &num1, &num2);

    printf("1. +\n");
    printf("2. -\n");
    printf("3. *\n");
    printf("4. /\n");

    printf("Enter your choice: ");
    scanf("%d", &choice);
```

```c
switch (choice) {

    case 1:

        printf("%.2f + %.2f = %.2f", num1, num2, num1 + num2);

        break;


    case 2:

        printf("%.2f - %.2f = %.2f", num1, num2, num1 - num2);

        break;


    case 3:

        printf("%.2f * %.2f = %.2f", num1, num2, num1 * num2);

        break;


    case 4:

        if (num2 != 0) {

            printf("%.2f / %.2f = %.2f\n", num1, num2, num1 / num2);

        }

        else {

            printf("Can't divide by zero");

        }

        break;

}


    return 0;

}
```

# While loop

- #include <stdio.h>

```c
int main () {

    int num, count = 0;
    int even_count = 0, odd_count = 0;

    printf("Enter 10 numbers\n");

    while (count < 10) {
        printf ("Enter %d number: ", count + 1);
        scanf ("%d", &num);

        if (num % 2 == 0) {
            even_count++;
        }
        else {
            odd_count++;
        }

        count++;
    }

    printf ("Even count: %d\n", even_count);
    printf ("Odd count: %d\n", odd_count);

    return 0;
}
```

- #include <stdio.h>

```c
int main () {

    int num;
    int even_count = 0, odd_count = 0;

    printf("Enter a series of numbers (Terminate with -99)\n");

    while (1) {
        printf ("Enter number: ");
        scanf ("%d", &num);

        if (num == -99) {
            break;
        }

        if (num % 2 == 0) {
            even_count++;
        }
        else {
            odd_count++;
        }

    }

    printf ("Even count: %d\n", even_count);
    printf ("Odd count: %d\n", odd_count);

    return 0;
}
```

# Do while loop

- #include <stdio.h>

```c
int main () {

    int num, i = 0;
    int even_count = 0, odd_count = 0;

    do {
        printf ("Enter %d number: ", i + 1);
        scanf ("%d", &num);

        if (num % 2 == 0) {
            even_count++;
        }
        else {
            odd_count++;
        }

        i++;

    } while (i < 10);

    printf ("Even count: %d\n", even_count);
    printf ("Odd count: %d\n", odd_count);

    return 0;
}
```

- #include <stdio.h>

```c
int main () {

  int num;
  int even_count = 0, odd_count = 0;

  printf("Enter a series of numbers (Terminate with -99)\n");


  do {
    printf ("Enter numbers: ");
    scanf ("%d", &num);

    if (num != -99) {
      if (num % 2 == 0) {
        even_count++;
      }
      else {
        odd_count++;
      }
    }
    else {
      break;
    }

  } while (num != -99);

  printf ("Even count: %d\n", even_count);
  printf ("Odd count: %d\n", odd_count);

  return 0;
}
```

# For loop

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

  int main () {

      int sum = 0;
      float avg;

      for (int i = 1; i <= 10; i++) {
          printf("Enter %d number: ", i);
          scanf("%d", &i);

          sum += i;
      }

      avg = sum / 10;

      printf("Average: %.2f", avg);

      return 0;
  }
  ```

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

  int main () {

      int rows;

      printf("Enter rows number: ");
      scanf("%d", &rows);

  for (int i = 1; i <= rows; ++i) {

      for (int j = 1; j <= i; ++j) {
  ```

```c
            printf("*");
        }
        printf("\n");
    }

    return 0;
}
```