Tutorial 05

Switch

1)
```c
#include <stdio.h>

int main() {
    int num1, num2;
    int choice;

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

    printf("1. +\n2. -\n3. *\n4. /\n");
    printf("Please enter your choice: ");
    scanf("%d", &choice);

    switch (choice) {
        case 1:
            printf("%d + %d = %d\n", num1, num2, num1 + num2);
            break;
        case 2:
            printf("%d - %d = %d\n", num1, num2, num1 - num2);
            break;
        case 3:
            printf("%d * %d = %d\n", num1, num2, num1 * num2);
            break;
        case 4:
            if (num2 != 0) {
                printf("%d / %d = %.2f\n", num1, num2, (float)num1 / num2);
            } else {
                printf("Error: Cannot divide by 0\n");
            }
            break;
        default:
            printf("Invalid choice\n");
    }
    return 0;
}
```

While Loop

1)
```c
#include <stdio.h>

int main() {
```

```c
    int num;
    int oddCount = 0;
    int evenCount = 0;

    for (int i = 0; i < 10; i++) {
        printf("Enter a number: ");
        scanf("%d", &num);
        if (num % 2 == 0) {
            evenCount++;
        } else {
            oddCount++;
        }
    }

    printf("Total count of odd numbers: %d\n", oddCount);
    printf("Total count of even numbers: %d\n", evenCount);

    return 0;
}
```

2)
```c
#include <stdio.h>

int main() {
    int num;
    int oddCount = 0;
    int evenCount = 0;

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

    while (num != -99) {
        if (num % 2 == 0) {
            evenCount++;
        } else {
            oddCount++;
        }
        printf("Enter a number: ");
        scanf("%d", &num);
    }

    printf("Total count of odd numbers: %d\n", oddCount);
    printf("Total count of even numbers: %d\n", evenCount);
```

```c
    return 0;
}
```

Do While Loop

1)
```c
#include <stdio.h>

int main() {
    int num;
    int oddCount = 0;
    int evenCount = 0;
    int i = 0;
    do {
        printf("Enter a number: ");
        scanf("%d", &num);
        if (num % 2 == 0) {
            evenCount++;
        } else {
            oddCount++;
        }
        i++;
    } while (i < 10);

    printf("Total count of odd numbers: %d\n", oddCount);
    printf("Total count of even numbers: %d\n", evenCount);

    return 0;
}
```

2)
```c
#include <stdio.h>

int main() {
    int num;
    int oddCount = 0;
    int evenCount = 0;

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

    do {
        if (num % 2 == 0) {
            evenCount++;
        } else {
```

```c
            oddCount++;
        }
        printf("Enter a number: ");
        scanf("%d", &num);
    } while (num != -99);

    printf("Total count of odd numbers: %d\n", oddCount);
    printf("Total count of even numbers: %d\n", evenCount);

    return 0;
}
```

For Loop

1)
```c
#include <stdio.h>
int main()
{
    int i, num, sum = 0;
    float avg;

    printf("Enter 10 numbers: \n");
    printf("----------------\n");


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

    avg = (float)sum/10;

    printf("Average of 10 numbers is: %.2f", avg);

    return 0;
}
```

2)
```c
#include <stdio.h>
int main()
{
    int i, j;
    for(i=1; i<=5; i++)
```

```c
    {
        for(j=1; j<=i; j++)
        {
            printf("*");
        }
        printf("\n");
    }

    return 0;
}
```