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Tutorial 05 – CS102.3

Switch

```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);


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);

}
```

```c
else {
printf("Can't divide by zero");
}
break;
}
return 0;
}
```

While loop

1)

```c
#include <stdio.h>
int main() {
    int number, counter = 0;
    int evenCount = 0, oddCount = 0;
    printf("Enter 10 numbers:\n");
    while (counter < 10) {
        printf("Enter number %d: ", counter + 1);
        scanf("%d", &number);

        if (number % 2 == 0) {
            evenCount++;
        } else {
            oddCount++;
        }

        counter++;
    }
```

```c
        printf("Even count: %d\n", evenCount);

        printf("Odd count: %d\n", oddCount);


        return 0;

}
```

2)

```c
#include <stdio.h>

int main() {

    int number;

    int evenCount = 0, oddCount = 0;


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


    while (1) {

        printf("Enter number: ");

        scanf("%d", &number);


        if (number == -99) {

            break;

        }


        if (number % 2 == 0) {

            evenCount++;

        } else {

            oddCount++;

        }
```

```c
    }
    printf("Even count: %d\n", evenCount);
    printf("Odd count: %d\n", oddCount);

    return 0;
}
```

Do-while loop

1)

```c
#include <stdio.h>

int main() {
    int number, index = 0;
    int evenCount = 0, oddCount = 0;

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

        if (number % 2 == 0) {
            evenCount++;
        } else {
            oddCount++;
        }

        index++;
    } while (index < 10);
```

```c
        printf("Even count: %d\n", evenCount);

        printf("Odd count: %d\n", oddCount);


        return 0;

}
```

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


int main() {

    int number;

    int evenCount = 0, oddCount = 0;


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


    do {

        printf("Enter number: ");

        scanf("%d", &number);


        if (number != -99) {

            if (number % 2 == 0) {

                evenCount++;

            } else {

                oddCount++;

            }

        } else {
```

```
            break;
        }


    } while (number != -99);


    printf("Even count: %d\n", evenCount);

    printf("Odd count: %d\n", oddCount);


    return 0;
}
```

For loop

1)

```
#include <stdio.h>


int main() {
    int total = 0;
    float average;


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

        int number;

        scanf("%d", &number);


        total += number;
    }
```

```c
    average = (float)total / 10;

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


    return 0;

}
```

2)

```c
#include <stdio.h>

int main() {
    int numRows;

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

    for (int row = 1; row <= numRows; ++row) {
        for (int col = 1; col <= row; ++col) {
            printf("*");
        }
        printf("\n");
    }

    return 0;
}
```