# TUTORIAL 5

## SWITCH

#include <stdio.h>

int main() {

double num1, num2;

int choice;

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

printf("\n1. +\n"); printf("2. -\n"); printf("3. \*\n"); printf("4. /\n");

printf("Please enter your choice: "); scanf("%d", &choice);

switch (choice) {

case 1:

printf("Result: %lf\n", num1 + num2);

break;

case 2:

printf("Result: %lf\n", num1 - num2);

break; case 3:

printf("Result: %lf\n", num1 \* num2);

break; case 4:

if (num2 != 0) { printf("Result: %lf\n", num1 / num2);

} else {

printf("Error: Division by zero is not allowed.\n");

}

break; default: printf("Invalid choice.\n");

break;

}

return 0;

}

## WHILE LOOP

1)

#include <stdio.h>

int main() { int numbers[10]; int oddCount = 0, evenCount = 0;

int input, count = 0;

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

while (count < 10) { printf("Number %d: ", count + 1); scanf("%d", &input);

numbers[count] = input;

count++;

}

for (int i = 0; i < 10; i++) {

// Check if the number is odd or even if (numbers[i] % 2 == 0) { evenCount++;

} else {

oddCount++;

}

}

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

return 0;

}

2)

#include <stdio.h>

int main() { int numbers[100]; int oddCount = 0, evenCount = 0; int input, count = 0;

printf("Enter a series of numbers (enter -99 to terminate):\n");

while (1) {

printf("Number %d: ", count + 1); scanf("%d", &input);

if (input == -99) { break;

}

numbers[count] = input;

count++;

}

for (int i = 0; i < count; i++) {

// Check if the number is odd or even if (numbers[i] % 2 == 0) { evenCount++;

} else {

oddCount++;

}

}

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

return 0;

}

## DO WHILE LOOP

1)

#include <stdio.h>

int main() { int numbers[10]; int oddCount = 0, evenCount = 0; int input, count = 0;

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

do {

printf("Number %d: ", count + 1); scanf("%d", &input);

numbers[count] = input;

count++;

} while (count < 10);

for (int i = 0; i < 10; i++) {

// Check if the number is odd or even if (numbers[i] % 2 == 0) { evenCount++;

} else {

oddCount++;

}

}

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

return 0;

}

2)

#include <stdio.h>

int main() { int numbers[100]; int oddCount = 0, evenCount = 0; int input, count = 0;

printf("Enter a series of numbers (enter -99 to terminate):\n");

do {

printf("Number %d: ", count + 1); scanf("%d", &input);

if (input == -99) { break;

}

numbers[count] = input;

count++;

} while (1);

for (int i = 0; i < count; i++) {

// Check if the number is odd or even if (numbers[i] % 2 == 0) { evenCount++;

} else {

oddCount++;

}

}

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

return 0;

}

## FOR LOOP

1)

#include <stdio.h>

int main() { int numbers[10]; int sum = 0; int count = 10;

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

for (int i = 0; i < count; i++) { printf("Number %d: ", i + 1); scanf("%d", &numbers[i]);

sum += numbers[i];

}

double average = (double)sum / count;

printf("Average value: %lf\n", average);

return 0;

}

2)

#include <stdio.h>

int main() { int rows = 5;

for (int i = 1; i <= rows; i++) { for (int j = 1; j <= i; j++) { printf("\*");

}

printf("\n");

}

return 0;

}