2. Program set 1

1. Sum of two integers

#include <iostream>

int main() {

    int a, b;

    std::cout << "Enter two integers: ";

    std::cin >> a >> b;

    std::cout << "Sum = " << (a + b) << "\n";

    return 0;

}

2. Simple integer calculator (+, -, \*, /, %)

#include <iostream>

int main() {

    int a, b; char op;

    std::cout << "enter calculation in the format" << std::endl;

    std::cout << "<num1> <operation> <num2>" << std::endl;

    std::cin >> a >> op >> b;

    if (op == '+') std::cout << a + b << std::endl;

    else if (op == '-') std::cout << a - b << std::endl;

    else if (op == '\*') std::cout << a \* b << std::endl;

    else if (op == '/') {

        if (b == 0) std::cout << "Division by zero!" << std::endl;

        else std::cout << a / b << std::endl;

    } else if (op == '%') {

        if (b == 0) std::cout << "Modulo by zero!" << std::endl;

        else std::cout << a % b << std::endl;

    } else std::cout << "Unknown operator" << std::endl;

    return 0;

}

3. Maximum of three numbers

#include <iostream>

int main() {

    int a, b, c;

    std::cout << "Enter three integers: ";

    std::cin >> a >> b >> c;

    int m = a;

    if (b > m) m = b;

    if (c > m) m = c;

    std::cout << "Maximum of the three = " << m << std::endl;

    return 0;

}

4. Calculate grade from marks out of 100

#include <iostream>

int main() {

    int m;

    std::cout << "Enter mark (0-100): ";

    std::cin >> m;

    if (m < 0 || m > 100) std::cout << "Invalid" << std::endl;

    else if (m >= 90) std::cout << "Grade: A" << std::endl;

    else if (m >= 80) std::cout << "Grade: B" << std::endl;

    else if (m >= 70) std::cout << "Grade: C" << std::endl;

    else if (m >= 60) std::cout << "Grade: D" << std::endl;

    else std::cout << "Grade: F" << std::endl;

    return 0;

}

5. Check range of a number

#include <iostream>

int main() {

    int x;

    std::cout << "Enter a number (1..10): ";

    std::cin >> x;

    if (x >= 1 && x <= 10)

    {

        std::cout << "In range" << std::endl;

    } else {

        std::cout << "Out of range" << std::endl;

    }

    return 0;

}

6. Multiplication table

#include <iostream>

int main() {

    int n;

    std::cout << "Enter an integer: ";

    std::cin >> n;

    for (int i = 1; i <= 10; ++i)

        std::cout << n << " x " << i << " = " << n \* i << std::endl;

    return 0;

}

7. Fibonacci sequence

#include <iostream>

int main() {

    int n;

    std::cout << "Enter number of terms: ";

    std::cin >> n;

    if (n > 0)

    {

        int a = 0, b = 1;

        for (int i = 1; i <= n; ++i)

        {

            std::cout << a << (i == n ? '\n' : ' ');

            int next = a + b;

            a = b; b = next;

        }

    }

    else

    {

        std::cout << "Number of terms not greater than zero" <<

        std::endl;

    }

    return 0;

}