

Week 2: Data & Operations

W2_Practical.cpp

Objective: Use variables of different data types and perform arithmetic operations. **Task:** Create a program that calculates the area and perimeter of a rectangle. Define variables for the length and width, perform the calculations, and print the results in a user-friendly format.

Solution:

C++

```
#include <iostream>
```

```
int main() {
```

```
    // Define variables for length and width. Use 'double' for decimal precision.
```

```
    double length = 8.5;
```

```
    double width = 3.0;
```

```
    // Calculate the area (length * width).
```

```
    double area = length * width;
```

```
    // Calculate the perimeter (2 * (length + width)).
```

```
    double perimeter = 2 * (length + width);
```

```
    // Print the results.
```

```
    std::cout << "Rectangle Dimensions:" << std::endl;
```

```
    std::cout << "Length: " << length << " metres" << std::endl;
```

```
    std::cout << "Width: " << width << " metres" << std::endl;
```

```
    std::cout << "-----" << std::endl;
```

```
    std::cout << "Calculated Area: " << area << " square metres" << std::endl;
```

```
    std::cout << "Calculated Perimeter: " << perimeter << " metres" << std::endl;
```

```
    return 0;
```

```
}
```