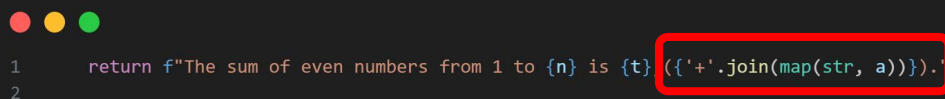


Data Types: Represent the kind of values variables can hold. Common types include integers, floats, strings, booleans, lists, and dictionaries.

Variables: Hold data and allow you to specify and change values. Variables must be declared before use, and their data type is determined by the assigned value.

Type Casting: Changing data type from one type to another using functions like `int()`, `float()`, `str()`.



```
1 return f"The sum of even numbers from 1 to {n} is {t} ({'+'.join(map(str, a))}).'
```

The image shows a code editor with a dark background and three colored window control buttons (red, yellow, green) in the top left corner. The code is on line 1. The expression `{'+'.join(map(str, a))}` is highlighted with a red rectangular box.



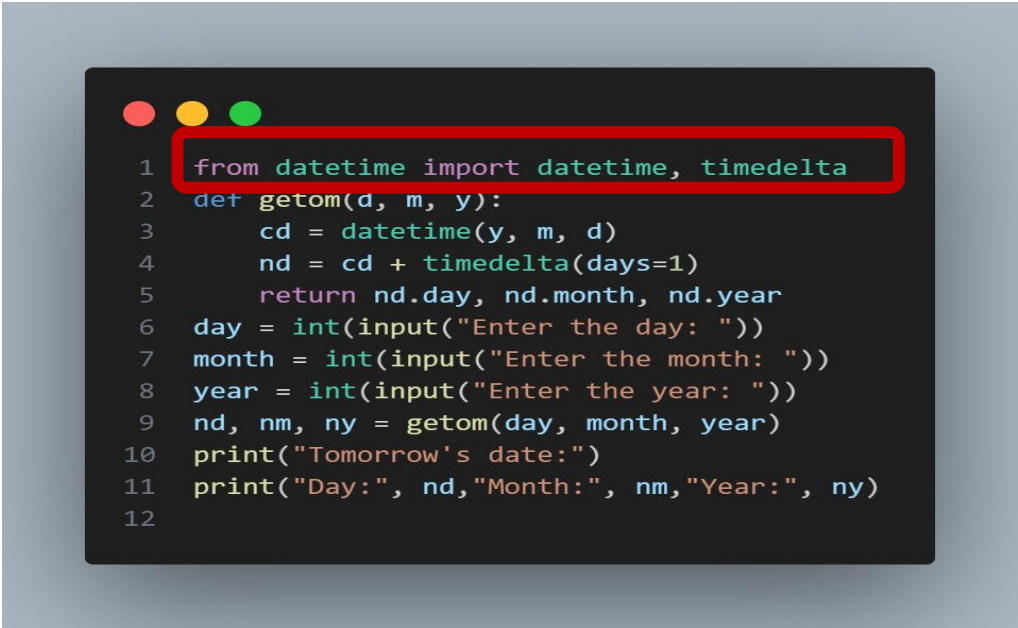
```
1 print("Prime Factors:", ', '.join(map(str, factors)))
```

The image shows a code editor with a dark background and three colored window control buttons (red, yellow, green) in the top left corner. The code is on line 1. The expression `','.join(map(str, factors))` is highlighted with a red rectangular box.

Input and Output: Interaction with users and displaying information. `input()` function for user input, `print()` function for output.

Conditions and Loops: Control program flow. Conditional statements (`if`, `elif`, `else`) execute different blocks of code based on conditions. Loops (`for`, `while`) repeat a block of code multiple times.

Math Library: Provides various mathematical functions and constants for calculations.



```
1 from datetime import datetime, timedelta
2 def getom(d, m, y):
3     cd = datetime(y, m, d)
4     nd = cd + timedelta(days=1)
5     return nd.day, nd.month, nd.year
6 day = int(input("Enter the day: "))
7 month = int(input("Enter the month: "))
8 year = int(input("Enter the year: "))
9 nd, nm, ny = getom(day, month, year)
10 print("Tomorrow's date:")
11 print("Day:", nd, "Month:", nm, "Year:", ny)
12
```

Strings: Sequences of characters enclosed in quotes. Manipulated using string methods and operators for operations like concatenation, slicing, and formatting.

```
1 def r(s):
2     w = s.split()
3     rw = w[::-1]
4     s = ' '.join(rw)
5     return s
6 x= input("Enter a sentence: ")
7 rs = r(x)
8 print("Reversed sentence:", rs)
9
```

```
1 def p(w):
2     w = w.lower()
3     if w == w[::-1]:
4         return True
5     else:
6         return False
7 x = input("Enter a word: ")
8 if p(x):
9     print(f"The word '{x}' is a palindrome.")
10 else:
11     print(f"The word '{x}' is not a palindrome.")
12
```