List Comprehension

What is List Comprehension?

- A **short and powerful way** to create lists in Python.
- Instead of using multiple lines of loops, we can create lists in **one line**.
- Improves readability and saves time.

Syntax:

new_list = [expression for item in iterable if condition]

Example 1: Squares of Numbers

```
numbers = [x**2 for x in range(1, 6)]
print(numbers)
```

Example 2: Even Numbers Only

```
evens = [x for x in range(10) if x % 2 == 0]
print(evens)
```

Advantages of List Comprehension:

- More **compact** and **readable**.
- **Faster** than normal loops.
- Allows adding **conditions** inside.