

# C# Lab: Transferring your Python Knowledge

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## Instructions

Translate the following Python functions into idiomatic C#. Pay close attention to **types**, **access modifiers**, and **method naming conventions** (PascalCase).

### Task 1: Basic Multiplier

Python:

```
1 def multiply_numbers(a, b):
2     return a * b
```

**C# Hint:** Think about whether the numbers should be `int`, `float`, or `double`.

### Task 2: List Filtering

Python:

```
1 def get_long_names(name_list):
2     result = []
3     for name in name_list:
4         if len(name) > 5:
5             result.append(name)
6     return result
```

**C# Hint:** You will need `List<string>`. Try writing this with a `foreach` loop first, then see if you can use LINQ (`.Where()`).

### Task 3: Dictionary Search

Python:

```
1 def get_user_age(user_dict, name):
2     if name in user_dict:
3         return f"{name} is {user_dict[name]} years old"
4     return "User not found"
```

**C# Hint:** Use `Dictionary<string, int>`. Remember string interpolation starts with `$`.