

## B. lambda\_function\_examples

March 21, 2024

### 0.0.1 Python Lambda Function examples

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A lambda function in Python is a small anonymous function defined using the lambda keyword. It can have any number of arguments but only one expression. Lambda functions are often used when you need a simple function for a short period and don't want to go through the process of defining a formal function using the `def` keyword.

#### Calculating the square of a number

##### Using normal function

```
[8]: def calc_square(x):  
      return x*x  
  
      print(calc_square(5))
```

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##### Using lambda function

```
[9]: square = lambda x : x*x  
      print(square(5))
```

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#### Adding two numbers

##### Using normal function

```
[10]: def add(x, y):  
       return x+y  
  
       print(add(3, 5))
```

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##### Using lambda

```
[11]: add = lambda x, y: x+y  
  
       print(add(3, 5))
```

Find if a number is prime or not

Using normal function

```
[12]: def is_prime(x):
        if x < 2:
            return False
        for i in range(2, x//2+1):
            if x % i == 0:
                return False
        return True
    print(is_prime(5))
    print(is_prime(41))
    print(is_prime(42))
```

True

True

False

Using lambda function

```
[13]: is_prime = lambda x: False if x < 2 else all(x % i != 0 for i in range(2, x//
    ↪2+1))
    print(is_prime(5))
    print(is_prime(41))
    print(is_prime(42))
```

True

True

False