

# Python Basics in VS Code Style

## 1. Variables and Data Types

```
# Variable declaration# Variable declaration

name = Alice # String# String

age = 30      # Integer# Integer

price = 19.99 # Float# Float

is_valid = True # Boolean# Boolean
```

## 2. Functions

```
def calculate_total(price, quantity=1):

    Calculate total price with tax

    tax_rate = 0.08

    total = (price * quantity) * (1 + tax_rate)

    return round(total, 2)
```

## 3. Control Flow

```
# If-elif-else statement# If-elif-else statement

score = 85

if score >= 90:

    grade = A

elif score >= 80:

    grade = B

else:

    grade = C
```

```
# Ternary operator# Ternary operator

status = Pass if score >= 60 else Fail
```

## 4. Classes and Objects

```
class Rectangle:

    def __init__(self, width, height):

        self.width = width

        self.height = height

    def area(self):

        return self.width * self.height
```

```
rect = Rectangle(5, 3)

print(fArea: {rect.area()})
```

## 5. Error Handling

```
try:

    result = 10 / 0

except ZeroDivisionError as e:

    print(fError: {e})

finally:

    print(Cleanup complete)
```