# Python reference sheet

These two programs contain short sections of code to remind you of the syntax for using and editing list values.

# Creating lists

**# Reference Sheet Program 3**

**# Demonstrates tools for working with lists**

**# Create a blank list of 0 length:**

**data = []**

**print("Created a blank list:")**

**print(data)**

**input("Press any key to continue")**

**print()**

**# Create a list of 5 empty values:**

**data = [None]\*5**

**print("Created a list of empty values:")**

**print(data)**

**input("Press any key to continue")**

**print()**

**# Create a list of given values:**

**data = ["Thor","Tony Stark","Hulk"]**

**print("Created a list of given values:")**

**print(data)**

**input("Press any key to continue")**

**print()**

# Updating a list

**# Update one value in a list**

**data[1] = "Ironman"**

**print("Updated data[1]:")**

**print(data)**

**input("Press any key to continue")**

**print()**

**# Append a value to the end of a list:**

**data.append("Captain America")**

**print("Appended a new value:")**

**print(data)**

**input("Press any key to continue")**

**print()**

**# Insert a value at a given point in list:**

**# (moves any values after that 1 place further up)**

**data.insert(1,"Black Widow")**

**print("Inserted 'Black Widow' in position 1:")**

**print(data)**

**input("Press any key to continue")**

**print()**

**# Remove a given value from a list:**

**# (automatically closes the empty space)**

**data.remove("Ironman")**

**print("Removed Ironman:")**

**print(data)**

**input("Press any key to continue")**

**print()**

**# Remove whatever value is in a given position:**

**# (automatically closes the empty space)**

**data.pop(2)**

**print("Removed whatever value was in position 2:")**

**print(data)**

**input("Press any key to continue")**

**print()**

# Finding list values and positions

**# Find the length of a list (number of values)**

**print("Length of list (number of values):")**

**print(len(data))**

**input("Press any key to continue")**

**print()**

**# Check if a value is in a list**

**if "Black Widow" in data:**

 **print("Black Widow is found!")**

**else:**

 **print("Black Widow is not in the list :(")**

**input("Press any key to continue")**

**print()**

**# Find the position of a known value**

**position = data.index("Black Widow")**

**print("Black widow is in position",position)**

**input("Press any key to continue")**

**print()**

# Sorting lists

**# Sort a list of items**

**data = sorted(data)**

**print("Sorted the list:")**

**print(data)**

**input("Press any key to continue")**

**print()**

**# Sort a list of items in reverse order**

**data = sorted(data,reverse=True)**

**print("Sorted the list in reverse order:")**

**print(data)**

**input("Press any key to continue")**

**print()**

# Finding list average, minimum and maximum values

**# Create a list of numbers (for the next few techniques)**

**data = [3,7,9,11,15,23]**

**print("Created a list of numbers:")**

**print(data)**

**input("Press any key to continue")**

**print()**

**# Add up all the values in the list**

**print("Total of all the numbers:")**

**print(sum(data))**

**input("Press any key to continue")**

**print()**

**# Find the highest value in the list**

**print("Highest / maximum value:")**

**print(max(data))**

**input("Press any key to continue")**

**print()**

**# Find the lowest value in the list**

**print("Smallest / minimum value:")**

**print(min(data))**

**input("Press any key to continue")**

**print()**

**# Calculate the mean average of values in a list**

**print("Mean average = total ÷ number of items:")**

**print(sum(data) / len(data))**

**input("Press any key to continue")**

**print()**