

Lab 2

```
def list_example():

    my_list = []

    my_list.append("12345")
    my_list.append("jaggs")
    my_list.append("chirag")
    my_list.append("password")
    my_list.append("Admin")
    my_list.append("6377456224")
    my_list.append(30)
    my_list.append("jagrati.jain44432@gmail.com")
    my_list.append("Female")

    print("List:", my_list)

    my_list.insert(5, "jagrati jain")
    my_list.insert(8, "Hello")

    print("List:", my_list)

    dic = {
        'address': '123 Main Rd',
        'city': 'New Delhi',
        'zipcode': '110001'
    }

    my_list.extend(['INDIA', 'User'])
    my_list.extend(list(dic.keys()))

    print("List:", my_list)

if __name__ == "__main__":
    list_example()

# Create a list with numeric and perform the following operations.
#     Write a program to swap the first and last elements in a list.
#     Write a program to find the sum of the digits in a list.
#     Write a program to find the smallest element in a list

my_list = [13, 2, 63, 46, 59]
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first_element = my_list[0]
last_element = my_list[-1]
my_list[0] = last_element
my_list[-1] = first_element
print(my_list)

def sum_of_digits(list_of_numbers):
    sum_of_digits = 0
    for number in list_of_numbers:
        sum_of_digits += number
    return sum_of_digits

print(sum_of_digits(my_list))

def smallest_element(list_of_numbers):
    smallest_element = list_of_numbers[0]
    for number in list_of_numbers:
        if number < smallest_element:
            smallest_element = number
    return smallest_element

print(smallest_element(my_list))

# Sort the dictionaries in ascending order based on the Key of the dictionary.
# Create the dictionary with Numeric as Value in Key - Value pair and find
the sum of all the values in the Dictionary.
# Write a Python code to demonstrate the sorting in descending order of
values with lambda function

my_dict = {"one": 1, "two": 2, "three": 3, "four": 4, "five": 5}
sorted_dict = sorted(my_dict.items(), key=lambda x: x[0])
print("Dictionary sorted in ascending order based on keys:", sorted_dict)

my_dict = {"one": 1, "two": 2, "three": 3, "four": 4, "five": 5}

sum_of_values = sum(my_dict.values())
print(" Sum of all values in the dictionary:", sum_of_values)

my_dict = {"one": 1, "two": 2, "three": 3, "four": 4, "five": 5}

```

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sorted_dict_descending = sorted(my_dict.items(), key=lambda x: x[1], reverse=True)
print(sorted_dict_descending)
```

The screenshot shows the Visual Studio Code interface. The terminal window displays the output of a Python script named `lab2.py`. The script performs several operations:

- It lists files in the current directory.
- It prints a list of tuples from a dictionary, sorted by value in descending order.
- It calculates the sum of all values in the dictionary.

The terminal output is as follows:

```
PS C:\Users\jagrati jain\vscode\jagrati jain vs\portindex.html> python -u "c:\Users\jagrati jain\Desktop\lab2.py"
List: ['12345', 'jaggs', 'chirag', 'password', 'Admin', '6377456224', 30, 'jagrati jain44432@gmail.com', 'Female']
List: ['12345', 'jaggs', 'chirag', 'password', 'Admin', 'jagrati jain', '6377456224', 30, 'Hello', 'jagrati jain44432@gmail.com', 'Female']
List: ['12345', 'jaggs', 'chirag', 'password', 'Admin', 'jagrati jain', '6377456224', 30, 'Hello', 'jagrati jain44432@gmail.com', 'Female', 'INDIA', 'User', 'address', 'city', 'zipcode']
[59, 2, 63, 46, 13]
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2
Dictionary sorted in ascending order based on keys: [('five', 5), ('four', 4), ('one', 1), ('three', 3), ('two', 2)]
Sum of all values in the dictionary: 15
[('five', 5), ('four', 4), ('three', 3), ('two', 2), ('one', 1)]
```

A tooltip in the center of the interface asks if the user wants to install the 'Python' extension from Microsoft. The status bar at the bottom shows the file path as `C:\Users\jagrati jain\vscode\jagrati jain vs\portindex.html`, line 15, column 28, and other system information like battery level (31°C), weather (Partly sunny), and date/time (06-08-2023).