Python Dictionaries - Exercise:

- Satinder Singh Sall, MCA 'C', 2570180

Exercise - 1:

```python
students = {
    "Satinder Singh Sall" : 90,
    "Soni Vaibhav Kumar" : 99,
    "Harsha HM" : 98,
    "Swayam Kehsarwani" : 40
}

print(students)

print(students["Harsha HM"])

students["Nick Nelson"] = 100
print(students)

students["Soni Vaibhav Kumar"] = 100
print(students)

del students["Swayam Kehsarwani"]
print(students)

print("Swayam" in students)

print(f"Keys: {students.keys()}")
print(f"Values: {students.values()}")

print(len(students))

for key, value in students.items():
    print(key, ":", value)
```

```
{'Satinder Singh Sall': 90, 'Soni Vaibhav Kumar': 99, 'Harsha HM': 98,
'Swayam Kehsarwani': 40}
98
{'Satinder Singh Sall': 90, 'Soni Vaibhav Kumar': 99, 'Harsha HM': 98,
'Swayam Kehsarwani': 40, 'Nick Nelson': 100}
{'Satinder Singh Sall': 90, 'Soni Vaibhav Kumar': 100, 'Harsha HM':
98, 'Swayam Kehsarwani': 40, 'Nick Nelson': 100}
{'Satinder Singh Sall': 90, 'Soni Vaibhav Kumar': 100, 'Harsha HM':
98, 'Nick Nelson': 100}
False
Keys: dict_keys(['Satinder Singh Sall', 'Soni Vaibhav Kumar', 'Harsha
HM', 'Nick Nelson'])
Values: dict_values([90, 100, 98, 100])
```

```
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Satinder Singh Sall : 90
Soni Vaibhav Kumar : 100
Harsha HM : 98
Nick Nelson : 100
```

Exercise - 2:

```python
s = "Satinder Singh Sall"
freq = {}

for ch in s:
    freq[ch] = freq.get(ch, 0) + 1

print(freq)

{'S': 3, 'a': 2, 't': 1, 'i': 2, 'n': 2, 'd': 1, 'e': 1, 'r': 1, ' ':
2, 'g': 1, 'h': 1, 'l': 2}
```

Exercise - 3:

```python
squares = {}

for i in range(1, 11):
    squares[i] = i * 1

print(squares)

{1: 1, 2: 2, 3: 3, 4: 4, 5: 5, 6: 6, 7: 7, 8: 8, 9: 9, 10: 10}
```

Exercise - 4:

```python
student = {
    "101" : {
        "name" : "Satinder Singh Sall",
        "marks" : 100,
        "age" : 22
    },

    "102": {
        "name" : "Soni Vaibhav Kumar",
        "marks" : 90,
        "age" : 10
    },
}

print(student)

{'101': {'name': 'Satinder Singh Sall', 'marks': 100, 'age': 22},
'102': {'name': 'Soni Vaibhav Kumar', 'marks': 90, 'age': 10}}
```

Exercise - 5:

```python
keys = ['a', 'b', 'c']
values = [1, 2, 3]

result = dict(zip(keys, values))

print(result)

{'a': 1, 'b': 2, 'c': 3}
```