Dictionaries

1. Creating a Dictionary:
    - You can create a dictionary by enclosing key-value pairs in curly braces `{}`.
    - Keys are unique and associated with their corresponding values using a colon `:`.
    - Example:

```
student = {
    "name": "John",
    "age": 20,
    "grade": "A",
    "is_enrolled": True
}
```

2. Accessing Dictionary Values:
    - You can access the values in a dictionary by specifying the corresponding key.
    - Use the square bracket notation `[]` with the key inside to access the value.
    - Example:

```
student = {
    "name": "John",
    "age": 20,
    "grade": "A",
    "is_enrolled": True
}
print(student["name"])        # Output: "John"
print(student["age"])         # Output: 20
print(student["is_enrolled"]) # Output: True
```

3. Modifying Dictionary Values:
    - Dictionaries are mutable, so you can update or change their values by specifying the key.
    - Assign a new value to the key using the square bracket notation `[]`.
    - Example:

```
student = {
    "name": "John",
    "age": 20,
    "grade": "A",
    "is_enrolled": True
}
```

```
student["grade"] = "B"
print(student)  # Output: {"name": "John", "age": 20, "grade": "B",
"is_enrolled": True}
```

4. Iterating over a Dictionary:

   - You can iterate over a dictionary using a `for` loop to access its keys, values, or both.
   - Use the `.keys()`, `.values()`, or `.items()` methods respectively.
   - Example:

```
student = {
    "name": "John",
    "age": 20,
    "grade": "A",
    "is_enrolled": True
}

# Iterate over keys
for key in student.keys():
    print(key)

# Iterate over values
for value in student.values():
    print(value)

# Iterate over key-value pairs
for key, value in student.items():
    print(key, ":", value)
```

The examples above demonstrate the process of creating dictionaries, accessing their values using keys, modifying values, and iterating over dictionaries to access keys, values, or key-value pairs. Dictionaries in Python provide a powerful way to store and manage data using key-value associations. Unclassified