Darshan UNIVERSITY
योगः कर्मसु कौशलम्

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Python Programming - 2304CS401

Lab - 8

Understand Working of dictionary

01) Write a program to create a dictionary for N values and print the size of the dictionary

In [2]:
```
n = int(input("Enter the number of key-value pairs: "))
dictionary = {}


for i in range(n):
    key = input(f"Enter key {i + 1}: ")
    value = input(f"Enter value for key {i + 1}: ")
    dictionary[key] = value


print("Dictionary:", dictionary)
print("Size of the dictionary:", len(dictionary))
```

```
Dictionary: {'abc': 'python', 'bcd': 'python2'}
Size of the dictionary: 2
```

02) Write a program to create a dictionary from a string.

In [6]:
```
string = input("Enter a string: ")
char_count = {}

for char in string:
    if char in char_count:
        char_count[char] += 1
    else:
        char_count[char] = 1

print("Dictionary from the string:", char_count)
```

```
Dictionary from the string: {'D': 1, 'a': 2, 'r': 1, 's': 1, 'h': 1, 'n':
1}
```

03) Write a program to sort a dictionary by key in ascending and descending order

In [7]:
```
n = int(input("Enter the number of key-value pairs: "))
dictionary = {}

for i in range(n):
    key = input(f"Enter key {i + 1}: ")
    value = input(f"Enter value for key {i + 1}: ")
    dictionary[key] = value

ascending_dict = dict(sorted(dictionary.items()))
print("Dictionary sorted by key (ascending):", ascending_dict)

descending_dict = dict(sorted(dictionary.items(), reverse=True))
print("Dictionary sorted by key (descending):", descending_dict)
```

```
Dictionary sorted by key (ascending): {'abc': 'python2', 'xyz': 'python1'}
Dictionary sorted by key (descending): {'xyz': 'python1', 'abc': 'python
2'}
```

04) Write a program to enter a key and add a key to a dictionary if it does not exist.

In [8]:

```
n = int(input("Enter the number of key-value pairs: "))
dictionary = {}


for i in range(n):
    key = input(f"Enter key {i + 1}: ")
    value = input(f"Enter value for key {i + 1}: ")
    dictionary[key] = value

new_key = input("Enter a key to add: ")
new_value = input("Enter the value for the new key: ")

if new_key not in dictionary:
    dictionary[new_key] = new_value
    print("Key added.")
else:
    print("Key already exists.")

print("Updated dictionary:", dictionary)
```

```
Key added.
Updated dictionary: {'abc': 'python1', 'xyz': 'python2', 'mno': 'python3',
'xyzz': 'python4'}
```

05) Write a program to sort a dictionary by value in ascending and descending order.

In [11]:

```
n = int(input("Enter the number of key-value pairs: "))
dictionary = {}


for i in range(n):
    key = input(f"Enter key {i + 1}: ")
    value = int(input(f"Enter value for key {i + 1} (integer): "))
    dictionary[key] = value


ascending_dict = dict(sorted(dictionary.items(), key=lambda item: item[1]))
print("Dictionary sorted by value (ascending):", ascending_dict)


descending_dict = dict(sorted(dictionary.items(), key=lambda item: item[1],
print("Dictionary sorted by value (descending):", descending_dict)
```

```
Dictionary sorted by value (ascending): {'xyz': 2, 'abc': 11, 'mno': 44}
Dictionary sorted by value (descending): {'mno': 44, 'abc': 11, 'xyz': 2}
```

06) Write a program to enter a key and to remove a key from a dictionary if it exists.

In [12]:
```
n = int(input("Enter the number of key-value pairs: "))
dictionary = {}

for i in range(n):
    key = input(f"Enter key {i + 1}: ")
    value = input(f"Enter value for key {i + 1}: ")
    dictionary[key] = value

key_to_remove = input("Enter the key to remove: ")

if key_to_remove in dictionary:
    del dictionary[key_to_remove]
    print("Key removed.")
else:
    print("Key not found.")

print("Updated dictionary:", dictionary)
```

```
Key removed.
Updated dictionary: {'mno': 'python2'}
```

07) Write a program to merge two dictionaries given by the user into one dictionary

In [13]:
```
n1 = int(input("Enter the number of key-value pairs for the first dictionar
dict1 = {}
for i in range(n1):
    key = input(f"Enter key {i + 1} for dictionary 1: ")
    value = input(f"Enter value for key {i + 1}: ")
    dict1[key] = value

n2 = int(input("Enter the number of key-value pairs for the second dictiona
dict2 = {}
for i in range(n2):
    key = input(f"Enter key {i + 1} for dictionary 2: ")
    value = input(f"Enter value for key {i + 1}: ")
    dict2[key] = value


merged_dict = dict1.copy()
merged_dict.update(dict2)

print("Merged dictionary:", merged_dict)
```

```
Merged dictionary: {'abc': 'python1', 'xyz': 'python'}
```

08) Write a program to convert two lists into a dictionary.

In [14]:

```
keys = input("Enter elements for the first list (keys) separated by spaces:

values = input("Enter elements for the second list (values) separated by sp


dictionary = dict(zip(keys, values))

print("Dictionary from the two lists:", dictionary)
```

```
Dictionary from the two lists: {'abc': 'python1', 'mno': 'python2'}
```