

Netaji Subhash Engineering College
Department of Computer Science & Engineering
B. Tech CSE 2nd Year 3rd Semester
2023-2024

Name of the Course: IT Workshop (Python)

Course Code: PCC-CS393

Name of the Student: ARITTRA BAG

Class Roll No.: 103

University Roll No.: 10900122105

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Assignment No.: A6_01

Problem Statement:

Write a program to create a dictionary that contains (i, i*i) such that i is an integral number between 1 and n (both included).

Python Code:

```
n=int(input("Enter the Number: "))
d={}
for i in range(1,n+1):
    d[i]=i*i
print(f"The Dictionary is: {d}")
```

Sample Output(s):

Enter the Number: 5

The Dictionary is: {1: 1, 2: 4, 3: 9, 4: 16, 5: 25}

Assignment No.: A6_02

Problem Statement:

Write a program to count the numbers of characters in a string and store them in a dictionary.

Python Code:

```
s=input("Enter the String: ").lower().replace(" ","")
d={}
for i in s:
    d[i]=s.count(i)
print(f"The Dictionary is: {d}")
```

Sample Output(s):

Enter the String: This is a String

The Dictionary is: {'t': 2, 'h': 1, 'i': 3, 's': 3, 'a': 1, 'r': 1, 'n': 1, 'g': 1}

Assignment No.: A6_03

Problem Statement:

Write a program to create a dictionary by combining two lists 'name' for employee name and 'salary' for employee salary. Use the list 'name' as the key and 'salary' as the value of dictionary elements.

Python Code:

```
n=int(input("Enter no. of Inputs: "))
d={}
name=[]
salary=[]
for i in range(n):
    name.append(input(f"Enter Name-{i+1}: "))
    salary.append(int(input("Enter Salary: ")))
    d[name[i]]=salary[i]
print(f"The Dictionary is: {d}")
```

Sample Output(s):

Enter no. of Inputs: 3

Enter Name-1: auz

Enter Salary: 10000

Enter Name-2: alpha

Enter Salary: 20000

Enter Name-3: omega

Enter Salary: 50000

The Dictionary is: {'auz': 10000, 'alpha': 20000, 'omega': 50000}

Assignment No.: A6_04

Problem Statement:

Write a program to input player's name (string) and runs (integer) scored for n number of players where n should be input from the keyboard. Store the player's details in a dictionary called 'cricket'. After preparing the dictionary, input the player's name and print the runs scored by the player otherwise returns '-1' if the player's name is not found.

Python Code:

```
n=int(input("Enter No. of Players: "))
cricket={}
name=[]
runs=[]
for i in range(n):
    name.append(input(f"Enter Name-{i+1}: ").lower().capitalize())
    runs.append(int(input("Enter Runs: ")))
    cricket[name[i]]=runs[i]
cf=cricket.keys()
print(f"Name of the Players is: {cf}")
nm=input("Enter Name: ").lower().capitalize()
if nm in cf:
    print(f"{nm} has scored {cricket[nm]} Runs!")
else:
    print(-1)
```

Sample Output(s):

Enter No. of Players: 3

Enter Name-1: alpha

Enter Runs: 59

Enter Name-2: omega

Enter Runs: 20

Enter Name-3: auz

Enter Runs: 99

Name of the Players is: dict_keys(['Alpha', 'Omega', 'Auz'])

Enter Name: alpha

Alpha has scored 59 Runs!

Assignment No.: A6_05

Problem Statement:

Write a program to sort (ascending order) a dictionary by value.

Python Code:

```
n=int(input("Enter the no. of Elements: "))
d={}
temp={}
for i in range(n):
    d[i]=int(input(f"Enter Element-{i+1}: "))
l=list(d.values())
l.sort()
c=0
for i in l:
    for j in d:
        if d[j]==i:
            temp[c]=i
            c+=1
print(f"The Sorted Dictionary is: {temp}")
```

Sample Output(s):

Enter the no. of Elements: 5

Enter Element-1: -25

Enter Element-2: 30

Enter Element-3: 90

Enter Element-4: 70

Enter Element-5: 80

The Sorted Dictionary is: {0: -25, 1: 30, 2: 70, 3: 80, 4: 90}

Assignment No.: A6_06

Problem Statement:

Write a program to merge two dictionaries.

Python Code:

```
n1=int(input("Enter no. of terms for Dict-1: "))
d1={}
for i in range(1,n1+1):
    s=input(f"Enter Key-{i} for Dict-1: ").lower()
    d1[s]=int(input(f"Enter Element-{i} for Dict-1: "))
n2=int(input("Enter no. of terms for Dict-2: "))
d2={}
for i in range(1,n2+1):
    s=input(f"Enter Key-{i} for Dict-2: ").lower()
    d2[s]=int(input(f"Enter Element-{i} for Dict-2: "))
print(f"The Dictionary-1 is: {d1}")
print(f"The Dictionary-2 is: {d2}")
print("The Merged Dictionary is: ",{**d1,**d2})
```

Sample Output(s):

```
Enter no. of terms for Dict-1: 2
Enter Key-1 for Dict-1: a
Enter Element-1 for Dict-1: 10
Enter Key-2 for Dict-1: b
Enter Element-2 for Dict-1: 20
Enter no. of terms for Dict-2: 2
Enter Key-1 for Dict-2: b
Enter Element-1 for Dict-2: 30
Enter Key-2 for Dict-2: c
Enter Element-2 for Dict-2: 40
The Dictionary-1 is: {'a': 10, 'b': 20}
The Dictionary-2 is: {'b': 30, 'c': 40}
The Merged Dictionary is: {'a': 10, 'b': 30, 'c': 40}
```