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

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Class Roll No.: 108

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Date of Experiment: 08/09/2023

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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 range: "))
d={}
for i in range(1,n+1):
   d[i]=i*i
print(d)
```

Sample Output(s):

```
Enter the range: 10
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100}
```

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 a string: ")
d={}
for i in s:
   if i in d.keys():
      d[i]+=1
   else:
      d[i]=1
print(d)
```

Sample Output(s):

```
Enter a string: characters
{'c': 2, 'h': 1, 'a': 2, 'r': 2, 't': 1, 'e': 1, 's': 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:

```
l1=input("Enter the names of employees (separated by a space): ").split()
l2=input("Enter the salaries of employees (separated by a space): ").split()
d={}
for i in range(len(l1)):
   d[l1[i]]=l2[i]
print(d)
```

Sample Output(s):

Enter the names of employees (separated by a space): Rohit Rahul Ayan Arittra Vaibhav
Enter the salaries of employees (separated by a space): 50000 65000 35000 45000 55000
{'Rohit': '50000', 'Rahul': '65000', 'Ayan': '35000', 'Arittra': '45000', 'Vaibhav': '55000'}

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 the no. of players: "))
cricket={}
for i in range(n):
   name=input("Enter the name: ")
   run=int(input("Enter runs: "))
   cricket[name]=run
name=input("Enter the name you want to search: ")
if name in cricket:
   print(cricket[name])
else:
   print(-1)
```

Sample Output(s):

```
Enter the no. of players: 5
Enter the name: Rohit Sharma
Enter runs: 55
Enter the name: Shubhman Gill
Enter runs: 54
Enter the name: Virat Kohli
Enter runs: 53
Enter the name: K.L.Rahul
Enter runs: 52
```

```
Enter the name: Ishan Kishan
Enter runs: 51
Enter the name you want to search: Virat Kohli
53
```

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 pairs: "))
d={}
temp=[]
for i in range(n):
   key=input("Enter the key: ")
   val=int(input("Enter value: "))
   d[key]=val
lst=list(d.values())
lst.sort()
for i in lst:
   for k in d:
      if d[k]==i:
         if k not in temp:
            temp.append(k)
            print(k,":",i)
```

Sample Output(s):

```
Enter the no. of pairs: 5
Enter the key: D
Enter value: 68
```

```
Enter the key: B
Enter value: 66
Enter the key: E
Enter value: 69
Enter the key: C
Enter value: 67
Enter the key: A
Enter value: 65
A : 65
B : 66
C : 67
D : 68
E : 69
```

Assignment No.: A6_06

Problem Statement:

Write a program to merge two dictionaries.

Python Code:

```
n1=int(input("Enter the no. of pairs for D1: "))
d1={}
d2={}
for i in range(n1):
   key=input("Enter the key: ")
   val=int(input("Enter value: "))
   d1[key]=val
n2=int(input("Enter the no. of pairs for D2: "))
for i in range(n2):
   key=input("Enter the key: ")
   val=int(input("Enter value: "))
   d2[key]=val
for i in d2:
   d1[i]=d2[i]
print(d1)
```

Sample Output(s):

```
Enter the no. of pairs for D1: 5
Enter the key: A
Enter value: 65
Enter the key: B
Enter value: 66
Enter the key: C
Enter value: 67
Enter the key: D
Enter value: 68
Enter the key: E
Enter value: 69
Enter the no. of pairs for D2: 5
Enter the key: F
Enter value: 70
Enter the key: G
Enter value: 71
Enter the key: H
Enter value: 72
Enter the key: I
Enter value: 73
Enter the key: J
Enter value: 74
{'A': 65, 'B': 66, 'C': 67, 'D': 68, 'E': 69, 'F': 70, 'G': 71, 'H': 72, 'I': 73, 'J': 74}
```