

Experiment2: Program to illustrate iteration over the list and dictionary.

CODE:

```
list1=[10,10.5,'Apple',34,47]
```

```
length=len(list1)
```

```
while(1):
```

```
    print('*****List Iteration*****')
```

```
    print('1.Using for Loop')
```

```
    print('2.Using for with range')
```

```
    print('3.Using while')
```

```
    print('4.Using list comprehension')
```

```
    print('5.Using Enumeration')
```

```
    print('6.Exit')
```

```
    m=int(input('Enter your choice:'))
```

```
    if(m==1):
```

```
        for i in list1:
```

```
            print(i)
```

```
    elif(m==2):
```

```
        for i in range(length):
```

```
            print(list1[i])
```

```
    elif(m==3):
```

```
        i=0
```

```
        while i < length:
```

```
    print(list1[i])
    i+=1
elif(m==4):
    [print(i) for i in list1]
elif(m==5):
    for i, val in enumerate(list1):
        print(i,",",val)
else:
    print('Exit from the program')
break
```

```
d={'key1':1,'key2':2,'key3':3}
leng=len(d)
for k in d:
    print(k)
print(list(d))
print(type(list(d)))
while(1):
    print('*****Dictionary Iteration*****')
    print('1.Through dictionary keys()')
    print('2.Through dictionary values()')
    print('3.Through dictionary items()')
```

```
print('4.Exit')  
c=int(input('Enter your choice:'))  
if(c==1):  
    for k in d.keys():  
        print(k)  
    print(d.keys())  
    print(type(d.keys()))  
    print(list(d.keys()))  
    print(type(list(d.keys())))  
elif(c==2):  
    for v in d.values():  
        print(v)  
    print(d.values())  
    print(type(d.values()))  
elif(c==3):  
    for k,v in d.items():  
        print('Key=',k,'Value=',v)  
    print(d.items())  
    print(type(d.items()))  
elif(c==4):  
    print('Exit from the program')  
break
```

OUTPUT:

```
*****List Iteration*****
1. Using for Loop
2.using for with range
3.Using While
4.Using List Comprehension
5.Using Enumeratuoin
6.Exit
Enter the Choice: 2
10
10.5
Apple
34
47
*****List Iteration*****
1. Using for Loop
2.using for with range
3.Using While
4.Using List Comprehension
5.Using Enumeratuoin
6.Exit
Enter the Choice: |
```

```
key1
key2
key3
['key1', 'key2', 'key3']
<class 'list'>
*****DICTIONARY ITERATION*****
1.Through Dictionary Keys()
2.Through Dictionary values()
3.Through Dictionary Items()
4.EXIT
Enter your Choice: 2
1
2
3
dict_values([1, 2, 3])
<class 'dict_values'>
*****DICTIONARY ITERATION*****
1.Through Dictionary Keys()
2.Through Dictionary values()
3.Through Dictionary Items()
4.EXIT
Enter your Choice: |
```