LAB # 10

TUPLE AND DICTIONARY

EXERCISE

A. Point out the errors, if any, and paste the output also in the following Python programs.

1. Code

```
t = (1, 2, 3)
t.append(4)
t.remove(0)
del tup[0]
```

Output

Tuple does not support item deletion.

```
>>> %Run er1.py
  Traceback (most recent call last):
    File "E:\Semester 1\P fund\Lab10\er1.py", line 2, in <module>
      t.append(4)
  AttributeError: 'tuple' object has no attribute 'append'

>>>
```

2. Code

```
1user_0=['username':'efermi','first':'enrico','last':'fermi',]
for key, value in 1user_0.items():
    print("\nKey: " ,key)
    print("Value: " ,value)
```

Output:

Dictionary is used in []

Integer at the beginning

```
>>> %Run er1.py
  Traceback (most recent call last):
    File "E:\Semester 1\P fund\Lab10\er1.py", line 1
      1user_0=['username':'efermi','first':'enrico','last':'fermi',]
              ^
  SyntaxError: invalid syntax
```

What will be the output of the following programs:

1. Code

```
tuple1 = ("green", "red", "blue")
tuple2 = tuple([7, 1, 2, 23, 4, 5])
tuple3 = tuple1 + tuple2
```

```
print(tuple3)
tuple3 = 2 * tuple1
print(tuple3)
print(tuple2[2 : 4])
print(tuple1[-1])
```

Output

```
>>> %Run er1.py

  ('green', 'red', 'blue', 7, 1, 2, 23, 4, 5)
  ('green', 'red', 'blue', 'green', 'red', 'blue')
  (2, 23)
  blue
```

2. Code

```
def main():
    d = {"red":4, "blue":1, "green":14, "yellow":2}
    print(d["red"])
    print(list(d.keys()))
    print(list(d.values()))
    print("blue" in d)
    print("purple" in d)
    d["blue"] += 10
    print(d["blue"])
main() # Call the main function
```

Output

```
>>> %Run er1.py

  4
  ['red', 'blue', 'green', 'yellow']
  [4, 1, 14, 2]
  True
  False
  11
```

C. Write Python programs for the following:

1. Write a program that create a buffet-style restaurant offers only five basic foods. Think of five simple foods, and store them in a tuple. (Hint:Use a for loop to print each food the restaurant offers. Also the restaurant changes its menu, replacing two of the items with different foods and display the menu again.

CODE :

```
print("->Welcome to The Restaurant<- \n\n ")
menu = ('Fish','Fried Rice' ,'Biryani','Chicken Karhai','Jalfrezi')#Menu
print("Menu is as Followed:\n")
for item in menu:
 print("- " , item)
menu = ('Prawns', 'Daal','Biryani','Chicken Karhai','Jalfrezi')#Updated
```

```
print("\nUpdated Menu is as Followed \n")
for item in menu:
 print("- " , item)
```

OUTPUT:

```
>>> %Run 'Task 1.py'

  ->Welcome to The Restaurant<-


  Menu is as Followed:

  -  Fish
  -  Fried Rice
  -  Biryani
  -  Chicken Karhai
  -  Jalfrezi

  Updated Menu is as Followed

  -  Prawns
  -  Daal
  -  Biryani
  -  Chicken Karhai
  -  Jalfrezi
```

2. Write a program for “Guess the capitals” using a dictionary to store the pairs of states and capitals so that the questions are randomly displayed. The program should keep a count of the number of correct and incorrect responses.

CODE :

```
#Program for Guess the capitals by using a dictionary
Guess = {"Pakistan" : "Islamabad","Russia" : "Moscow","Germany" : "Bonn"}
valid=0
invalid=0
for Country , Capital in Guess.items():
    print("\t Give The Capital Of The City = " ,Country)
    ans= input("Write Answer : " )
    if ans == Capital:
        print("*Your Answer Is Correct*" )
        valid=valid+1

    else:
        print("*Your Answer Is Invalid*")
        invalid=invalid+1

print("corrects: ",valid)
print("In-corrects: ",invalid)
```

OUTPUT:

```
>>> %Run 'task 10 2.py'

          Give The Capital Of The City =  Pakistan
  Write Answer : Islamabad
  *Your Answer Is Correct*
          Give The Capital Of The City =  Russia
  Write Answer : Munich
  *Your Answer Is Invalid*
          Give The Capital Of The City =  Germany
  Write Answer : Bonn
  *Your Answer Is Correct*
  corrects:  2
  In-corrects:  1
```

3. Write a pogram that make a dictionary called favorite_places. Think of three names to use as keys in the dictionary, and store three favorite places for each person through list. Loop through the dictionary, and print each person's name and their favorite places.
Output look alike:
abc likes the following places:
- Bear Mountain
- Death Valley
- Tierra Del Fuego

CODE :

```
favorite_places= {'Moiz': ['Niagra Fall', 'Dream World', 'Maldives']
,'\nShaheer': ['Tibetan plateau','Taj Mahal' ,'badshahi masjid']
,'\nTalal': ['Burj Khalifa', 'Eifel tower', 'Devils Point']}
for names, places in favorite_places.items():
 print(names, " likes the following places:")
 for place in places:
    print("- " , place)
```

OUTPUT:

```
>>> %Run 'task 3.py'

  Moiz  likes the following places:
  -  Niagra Fall
  -  Dream World
  -  Maldives

  Shaheer  likes the following places:
  -  Tibetan plateau
  -  Taj Mahal
  -  badshahi masjid

  Talal  likes the following places:
  -  Burj Khalifa
  -  Eifel tower
  -  Devils Point
```