Python Lab Set No: 9 1989SA1210

Code: B171T2206 IT-C M. Jaya Chandra Varma

1)

Aim:- write a function ball_collide that takes two balls as parameters and computes if they are colliding, your function should return a Boolean representing whether or not the balls are colliding.

Program:-

```
print('start')
import math
def ball_collide(x1, y1, r1, r2, y2, r2):
    distance = math.sqrt((x2-x1)**2+(y2-y1)**2)
    sum_radius = r1+r2
    centre = distance/2
    if centre <= sum_radius:
        return True
    else:
        return false.
```

expected output:-

```
ball_collide(1,2,3,4,5,6)
True
ball_collide(13,14,1,24,25,1)
false.
```

Python Lab Set No: 9 19B95A1210

code: B17IT2206 IT - C (2) M. Jaya Chandra Varma

2) Aim:-

write a program combine-lists that combines two lists into a dictionary.

Description:-

Python offers a range of compound data types often referred to as sequence list is one of the most frequently used and very versatile data type used in python In python programming, a List is created by placing all the elements inside a square bracket [] separated by commas It can have any number of it and they may be of different types.

Program:-

```
L1 = []
L2 = []
Dictionary = { }
n = int(input("Enter the value"))
for i in range(n):
    name = input("Enter the 3names:")
    L1.append(names)
for ij in range(n):
    salaries = int(input("Enter the 3 salaries:"))
    L2.append(salaries)
print("Names List is:", L1)
print("salary List is:", L2)
for i,j in zip(L1, L2):
    Dictionary[i] = j

print(Dictionary)
```

Expected output:-

```
Enter the value 2
Enter the 2 names : Jaya
Enter the 2 names : varma
Enter the 2 salaxies : 1000
Enter the 2 salaxies : 2000
Name List is : ['jaya', 'varma']
Salary List is : ['1000', 2000]
{'jaya': 1000, 'varma': 2000}
```

exam.py - C:/Users/VARMA/Desktop/exam.py (3.8.3)

File Edit Format Run Options Window Help

```
import math
def ball_collide(x1,y1,r1,x2,y2,r2):
    distance=math.sqrt((x2-x1)**2+(y2-y1)**2)
    sum_radius=r1+r2
    centre=distance/2
    if centre<=sum_radius:
        return True
    else:
        return False
```

Ln: 1

Python 3.8.3 Shell

File Edit Shell Debug Options Window Help

```
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:20:19) [MSC v.1925 32 bit (In
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/VARMA/Desktop/exam.py ==========
>>> ball_collide(13,14,1,24,25,1)
False
>>>
========== RESTART: C:/Users/VARMA/Desktop/exam.py ==========
>>> ball_collide(1,2,3,4,5,6)
True
>>>
```

Ln: 11

main.py

Run

```
L1=[]
L2=[]
Dictionary={}
n=int(input('enter the value'))
for i in range(n):
    name = input('enter the name:')
    L1.append(name)
for i in range(n):
    salaries = int(input('enter the  salarie:'))
    L2.append(salaries)
print('name List is :',L1)
print('salary List is :',L2)
for i,j in zip(L1,L2):
      Dictionary[i]=j
print(Dictionary)
```

Shell

Clear

```
enter the value2
enter the name:jaya
enter the name:varma
enter the  salarie:1000
enter the  salarie:2000
name List is : ['jaya', 'varma']
salary List is : [1000, 2000]
{'jaya': 1000, 'varma': 2000}
>
```