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**PYTHON PROGRAMMING**

**Continuous Assessment 2**

**School of Computer Science and Engineering**

Name of the faculty member: **Mr. Mohit Prakram**

Course Code: **INT108**

Course Title: **Python**

**Programming**

Maximum Marks: **30 (Thirty)**

Time: 2 weeks

Date of Allotment: **Oct 03, 2022**

Date of Submission: **Nov 17, 2022**

**Submitted by:**

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## PROJECT STATEMENT

Your task is to find the name of student with Maximum Marks (number of levels a student's rank change has to be displayed) after change in marks and the jump or change in the student's rank that is previous rank – current rank.

You are given three lists 1). Names 2). Marks 3). Updates:

- Names contain the names of the students.
- Marks contains the marks of same students.
- Updates contains the integer values by which marks of these students are to be updated.

(Student is free to decide the input and output layout for this project.)

## PROJECT SOLUTION CODE:

```
Names = ["Mahendra","Parth","Raju"]          #Names
print("Names : ",Names)
Marks = [94,98,97]                            #Marks
print("Marks : ",Marks)
dict1 = dict(zip(Names,Marks))
m1 = sorted(Marks)

r1 = []
```

```

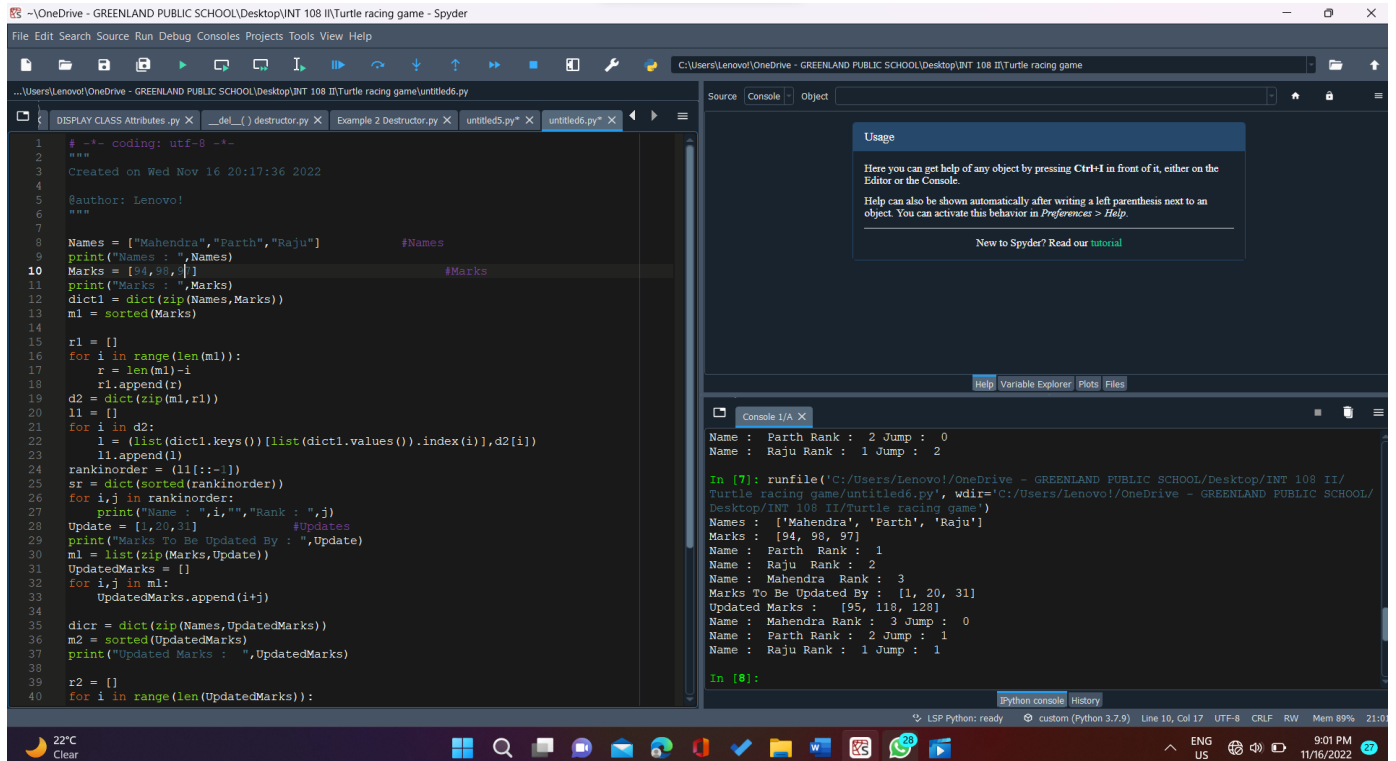
for i in range(len(m1)):
    r = len(m1)-i
    r1.append(r)
d2 = dict(zip(m1,r1))
l1 = []
for i in d2:
    l = (list(dict1.keys())[list(dict1.values()).index(i)],d2[i])
    l1.append(l)
rankinorder = (l1[::-1])
sr = dict(sorted(rankinorder))
for i,j in rankinorder:
    print("Name : ",i,"","Rank : ",j)
Update = [1,20,31]          #Updates
print("Marks To Be Updated By : ",Update)
m1 = list(zip(Marks,Update))
UpdatedMarks = []
for i,j in m1:
    UpdatedMarks.append(i+j)

dicr = dict(zip(Names,UpdatedMarks))
m2 = sorted(UpdatedMarks)
print("Updated Marks : ",UpdatedMarks)

```

```
r2 = []
for i in range(len(UpdatedMarks)):
    r = len(UpdatedMarks)-i
    r2.append(r)
d3 = dict(zip(UpdatedMarks,r2))
l2 = []
for i in d3:
    l5 = (list(dicr.keys())[list(dicr.values()).index(i)],d3[i])
    l2.append(l5)
rankinorde = (l2[::-1])
st = dict(sorted(rankinorde))
for i in sr:
    print("Name : ",i,"Rank : ",st[i],"Jump : ",abs(st[i]-sr[i]))
```

# SCREENSHOT OF THE CODE IMPLEMENTED:



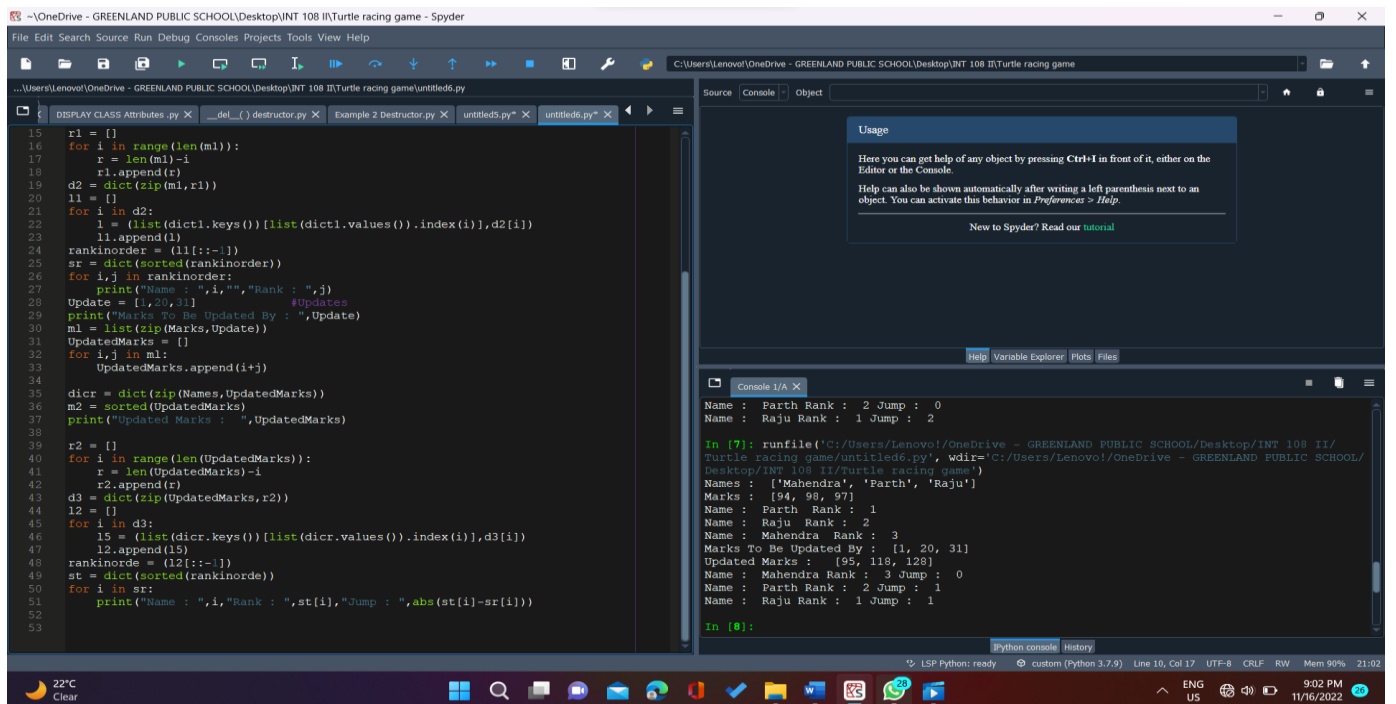
```
1  # -*- coding: utf-8 -*-
2  """
3  Created on Wed Nov 16 20:17:36 2022
4
5  @author: Lenovo!
6  """
7
8  Names = ["Mahendra", "Parth", "Raju"]          #Names
9  print("Names : ", Names)
10 Marks = [94, 98, 97]
11 print("Marks : ", Marks)                       #Marks
12 dict1 = dict(zip(Names, Marks))
13 m1 = sorted(Marks)
14
15 r1 = []
16 for i in range(len(m1)):
17     r = len(m1)-1
18     r1.append(r)
19 d2 = dict(zip(m1, r1))
20 l1 = []
21 for i in d2:
22     l = (list(dict1.keys())[list(dict1.values()).index(i)], d2[i])
23     l1.append(l)
24 rankinorder = (l1[::-1])
25 sr = dict(sorted(rankinorder))
26 for i,j in rankinorder:
27     print("Name : ", i, "", "Rank : ", j)
28 Update = [1, 20, 31]          #Updates
29 print("Marks To Be Updated By : ", Update)
30 m1 = list(zip(Marks, Update))
31 UpdatedMarks = []
32 for i,j in m1:
33     UpdatedMarks.append(i+j)
34
35 dicr = dict(zip(Names, UpdatedMarks))
36 m2 = sorted(UpdatedMarks)
37 print("Updated Marks : ", UpdatedMarks)
38
39 r2 = []
40 for i in range(len(UpdatedMarks)):
```

Console 1/A X

```
Name : Parth Rank : 2 Jump : 0
Name : Raju Rank : 1 Jump : 2

In [7]: runfile('C:/Users/Lenovo!/OneDrive - GREENLAND PUBLIC SCHOOL/Desktop/INT 108 II/
Turtle racing game/untitled6.py', wdir='C:/Users/Lenovo!/OneDrive - GREENLAND PUBLIC SCHOOL/
Desktop/INT 108 II/Turtle racing game')
Names : ['Mahendra', 'Parth', 'Raju']
Marks : [94, 98, 97]
Name : Parth Rank : 1
Name : Raju Rank : 2
Name : Mahendra Rank : 3
Marks To Be Updated By : [1, 20, 31]
Updated Marks : [95, 118, 128]
Name : Mahendra Rank : 3 Jump : 0
Name : Parth Rank : 2 Jump : 1
Name : Raju Rank : 1 Jump : 1

In [8]:
```



```
15 r1 = []
16 for i in range(len(m1)):
17     r = len(m1)-1
18     r1.append(r)
19 d2 = dict(zip(m1, r1))
20 l1 = []
21 for i in d2:
22     l = (list(dict1.keys())[list(dict1.values()).index(i)], d2[i])
23     l1.append(l)
24 rankinorder = (l1[::-1])
25 sr = dict(sorted(rankinorder))
26 for i,j in rankinorder:
27     print("Name : ", i, "", "Rank : ", j)
28 Update = [1, 20, 31]          #Updates
29 print("Marks To Be Updated By : ", Update)
30 m1 = list(zip(Marks, Update))
31 UpdatedMarks = []
32 for i,j in m1:
33     UpdatedMarks.append(i+j)
34
35 dicr = dict(zip(Names, UpdatedMarks))
36 m2 = sorted(UpdatedMarks)
37 print("Updated Marks : ", UpdatedMarks)
38
39 r2 = []
40 for i in range(len(UpdatedMarks)):
41     r = len(UpdatedMarks)-1
42     r2.append(r)
43 d3 = dict(zip(UpdatedMarks, r2))
44 l2 = []
45 for i in d3:
46     l5 = (list(dicr.keys())[list(dicr.values()).index(i)], d3[i])
47     l2.append(l5)
48 rankinorde = (l2[::-1])
49 st = dict(sorted(rankinorde))
50 for i in sr:
51     print("Name : ", i, "Rank : ", st[i], "Jump : ", abs(st[i]-sr[i]))
52
53
```

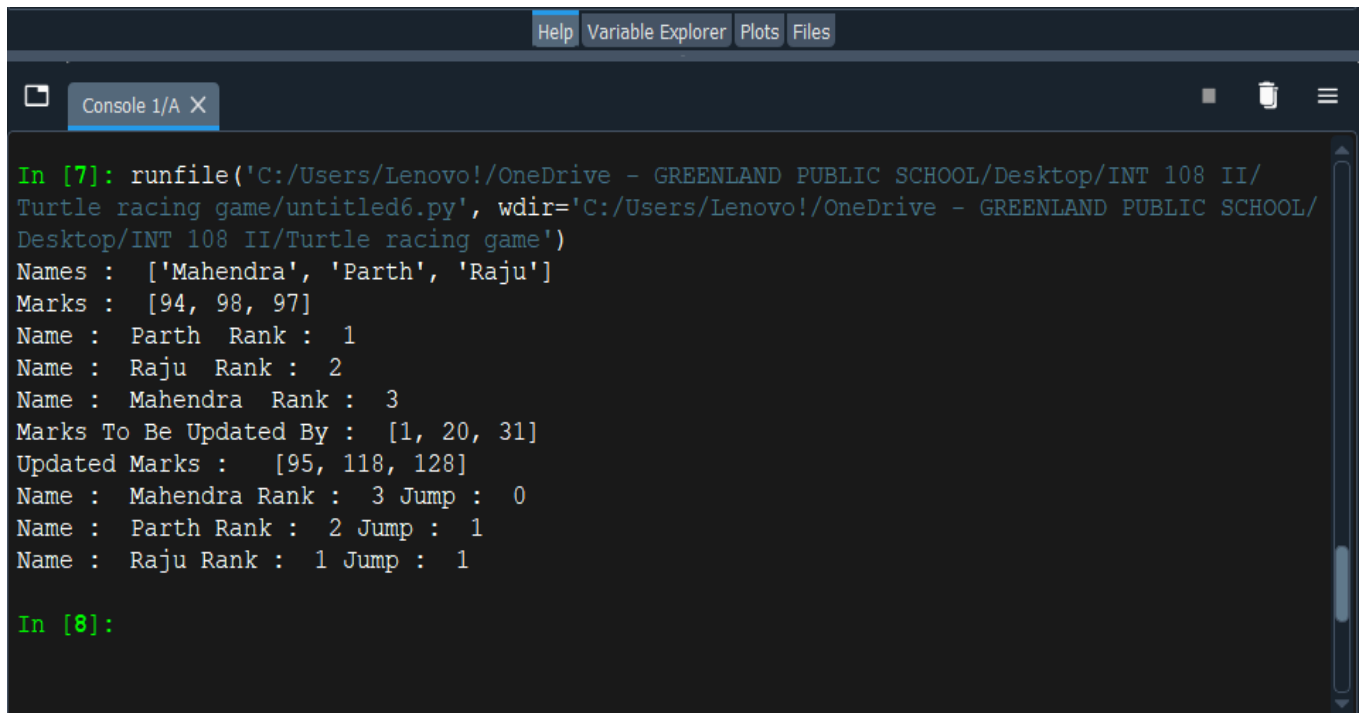
Console 1/A X

```
Name : Parth Rank : 2 Jump : 0
Name : Raju Rank : 1 Jump : 2

In [7]: runfile('C:/Users/Lenovo!/OneDrive - GREENLAND PUBLIC SCHOOL/Desktop/INT 108 II/
Turtle racing game/untitled6.py', wdir='C:/Users/Lenovo!/OneDrive - GREENLAND PUBLIC SCHOOL/
Desktop/INT 108 II/Turtle racing game')
Names : ['Mahendra', 'Parth', 'Raju']
Marks : [94, 98, 97]
Name : Parth Rank : 1
Name : Raju Rank : 2
Name : Mahendra Rank : 3
Marks To Be Updated By : [1, 20, 31]
Updated Marks : [95, 118, 128]
Name : Mahendra Rank : 3 Jump : 0
Name : Parth Rank : 2 Jump : 1
Name : Raju Rank : 1 Jump : 1

In [8]:
```

## OUTPUT:



The screenshot shows a Jupyter Notebook interface with a dark theme. At the top, there are tabs for 'Help', 'Variable Explorer', 'Plots', and 'Files'. Below these is a tab for the console, labeled 'Console 1/A X'. The console displays the output of a Python script executed in cell [7]. The output shows the execution of `runfile` on a file named `untitled6.py` located at `C:/Users/Lenovo!/OneDrive - GREENLAND PUBLIC SCHOOL/Desktop/INT 108 II/Turtle racing game/untitled6.py`. The script outputs the names of three participants: Mahendra, Parth, and Raju, along with their marks [94, 98, 97]. It then calculates their ranks: Parth is 1st, Raju is 2nd, and Mahendra is 3rd. Next, it shows the marks to be updated by [1, 20, 31] and the updated marks [95, 118, 128]. Finally, it displays the names, ranks, and jump values for each participant: Mahendra (Rank 3, Jump 0), Parth (Rank 2, Jump 1), and Raju (Rank 1, Jump 1). Cell [8] is currently empty.

```
In [7]: runfile('C:/Users/Lenovo!/OneDrive - GREENLAND PUBLIC SCHOOL/Desktop/INT 108 II/
Turtle racing game/untitled6.py', wdir='C:/Users/Lenovo!/OneDrive - GREENLAND PUBLIC SCHOOL/
Desktop/INT 108 II/Turtle racing game')
Names : ['Mahendra', 'Parth', 'Raju']
Marks : [94, 98, 97]
Name : Parth Rank : 1
Name : Raju Rank : 2
Name : Mahendra Rank : 3
Marks To Be Updated By : [1, 20, 31]
Updated Marks : [95, 118, 128]
Name : Mahendra Rank : 3 Jump : 0
Name : Parth Rank : 2 Jump : 1
Name : Raju Rank : 1 Jump : 1

In [8]:
```