



RV COLLEGE OF ENGINEERING®
(Autonomous Institution affiliated to VTU, Belagavi)
DEPARTMENT OF MASTER OF COMPUTER
APPLICATIONS
TPS Activity- I
OBJECT ORIENTED PROGRAMMING
COURSE CODE –20MCA14
Semester – I Sec - B 2021

Faculty Name : Dr.Jasmine KS

Flipped Class room Activity: Think-Pair-Share Activity (TPS)

Domain: Object oriented Programming Topic: Different data types

Students: MCA I st Semester

Think Phase - [15 minutes]

Question:

Assume there is a need to do the result calculation process for students of a class.

TPS1: Identify suitable data types can be used to solve this particular application

Provide the possible solutions using data types such as list, tuple, string, dictionary and justify the suitability of the data type chosen

Course Outcomes

After going through this course, the student will be able to:

CO1: Understand the basic concepts of object oriented programming

CO2: Identify and apply relevant object-oriented concepts in any real world scenario

CO3: Utilize object-oriented concepts to solve any real world problem

CO4: Analyze solutions using OOPs concepts for real world applications

GROUP I (Roll No :61 - 65)

ROLL NO	STUDENT NAME
61	RAKSHITA.H
62	HARINI GOWDA
63	MALLIKARJUN
64	DURGESH KUMAR
65	SACHIN M

In this program we are using two data types

1.Dictionary: For storing the data of the student's name,roll no marks we are using dictionary here.

2.List: For storing the students marks we are using list.

Python Dictionary

Python dictionary is an unordered collection of items. Each item of a dictionary has a key/value pair.

Dictionaries are optimized to retrieve values when the key is known.

Creating a dictionary is as simple as placing items inside curly braces `{ }` separated by commas.

An item has a key and a corresponding value that is expressed as a pair (**key: value**).

While the values can be of any data type and can repeat, keys must be of immutable type ([string](#), [number](#) or [tuple](#) with immutable elements) and must be unique.

Python List

Lists are used to store multiple items in a single variable.

Lists are one of 4 built-in data types in Python used to store collections of data, the other 3 are [Tuple](#), [Set](#), and [Dictionary](#), all with different qualities and usage.

Lists are created using square brackets:

List items are ordered, changeable, and allow duplicate values.

List items are indexed, the first item has index `[0]`, the second item has index `[1]` etc.

PROGRAM:

```
# Enter student name and five subject marks calculate
students=dict()
n=int(input("Enter Number of student:"))
for i in range(1,n+1):
    list1=[]
    temp=dict()
    temp["Name"]=input("Enter Student name:")
    temp["Roll No"]=input("Enter Roll Number:")
    temp["Marks"]=list1
    for j in range(0,5):
        m=int(input("Enter marks:"))
        list1.append(m)
    temp["total"]=list1[0]+list1[1]+list1[2]+list1[3]+list1[4]
    avg=temp["total"]/5
    if avg>=91 and avg<=100:
        print("Your grade is S")
    elif avg>=81 and avg<91:
        print("Your grade is A")
    elif avg>=71 and avg<81:
        print("Your grade is B")
    elif avg>=61 and avg<71:
        print("Grade C")
    elif avg>=51 and avg<61:
        print("Your grade is D")
    else:
        print("Fail")
    students[i]=temp
for key in students.keys():
    print(key,students[key])
```

OUTPUT:

Enter Number of student:5

Enter Student name:rakshita

Enter Roll Number:61

Enter marks:98

Enter marks:97

Enter marks:96

Enter marks:95

Enter marks:88

Your grade is S

```
1 {'Name': 'rakshita', 'Roll No': '61', 'Marks': [98, 97, 96, 95, 88], 'total': 474}
```

Enter Student name:harini

Enter Roll Number:62

Enter marks:99

Enter marks:98

Enter marks:97

Enter marks:90

Enter marks:96

Your grade is S

```
1 {'Name': 'rakshita', 'Roll No': '61', 'Marks': [98, 97, 96, 95, 88], 'total': 474}
```

```
2 {'Name': 'harini', 'Roll No': '62', 'Marks': [99, 98, 97, 90, 96], 'total': 480}
```

Enter Student name:mallikarjun

Enter Roll Number:63

Enter marks:90

Enter marks:98

Enter marks:97

Enter **marks**:96

Enter marks:95

Your grade is S

```
1 {'Name': 'rakshita', 'Roll No': '61', 'Marks': [98, 97, 96, 95, 88], 'total': 474}
```

```
2 {'Name': 'harini', 'Roll No': '62', 'Marks': [99, 98, 97, 90, 96], 'total': 480}
```

3 {'Name': 'mallikarjun', 'Roll No': '63', 'Marks': [90, 98, 97, 96, 95], 'total': 476}

Enter Student name:durgesh

Enter Roll Number:64

Enter marks:90

Enter marks:98

Enter marks:97

Enter marks:96

Enter marks:95

Your grade is S

1 {'Name': 'rakshita', 'Roll No': '61', 'Marks': [98, 97, 96, 95, 88], 'total': 474}

2 {'Name': 'harini', 'Roll No': '62', 'Marks': [99, 98, 97, 90, 96], 'total': 480}

3 {'Name': 'mallikarjun', 'Roll No': '63', 'Marks': [90, 98, 97, 96, 95], 'total': 476}

4 {'Name': 'durgesh', 'Roll No': '64', 'Marks': [90, 98, 97, 96, 95], 'total': 476}

Enter Student name:sachin

Enter Roll Number:65

Enter marks:90

Enter marks:98

Enter marks:97

Enter marks:96

Enter marks:95

Your grade is S

1 {'Name': 'rakshita', 'Roll No': '61', 'Marks': [98, 97, 96, 95, 88], 'total': 474}

2 {'Name': 'harini', 'Roll No': '62', 'Marks': [99, 98, 97, 90, 96], 'total': 480}

3 {'Name': 'mallikarjun', 'Roll No': '63', 'Marks': [90, 98, 97, 96, 95], 'total': 476}

4 {'Name': 'durgesh', 'Roll No': '64', 'Marks': [90, 98, 97, 96, 95], 'total': 476}

5 {'Name': 'sachin', 'Roll No': '65', 'Marks': [90, 98, 97, 96, 95], 'total': 476}