Worksheet 1.3

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Branch: CSE - AIML **Section/Group: 21AML - 9 - A**
Semester: 3rd
Subject Name: Python for Machine Learning **Subject Code 21CSH-238**

Program 1

Create a tuple with 5 values of different data types. Apply Reverse and index functions.

Code:

```
print("Enter the following values: ")
intNum = int(input("Enter int value: "))
floatNum = float(input("Enter float value"))
str = input("Enter string: ")
arr = []
for i in range(5):
    tempInt = int(input("enter the numbers for the list: "))
    arr.append(tempInt)
strName = input("Enter name of the student: ")
strAge = int(input("Enter the age of the student: "))
dict1 = {
    "Name": strName,
    "Age": strAge,
}
```

```
mainTuple = (intNum, floatNum, str, arr, dict1)

print()

print(mainTuple)

print()

newTuple = mainTuple[::-1]

mainTuple = newTuple

print()

print("After reversing: ")

print()

print(mainTuple)

print()

print()

print(f"Index of list in the tuple is: {mainTuple.index(arr)}")
```

Output:

```
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$ python -u "d:\Chandigarh University\Coding Excercises\Sem - 3\Python fo
Enter the following values:
Enter int value: 10
Enter float value2.5
Enter string: hello world
enter the numbers for the list: 0
enter the numbers for the list: 1
enter the numbers for the list: 2
enter the numbers for the list: 3
enter the numbers for the list: 4
Enter name of the student: John
Enter the age of the student: 19

(10, 2.5, 'hello world', [0, 1, 2, 3, 4], {'Name': 'John', 'Age': 19})


After reversing:

({'Name': 'John', 'Age': 19}, [0, 1, 2, 3, 4], 'hello world', 2.5, 10)


Index of list in the tuple is: 1
```
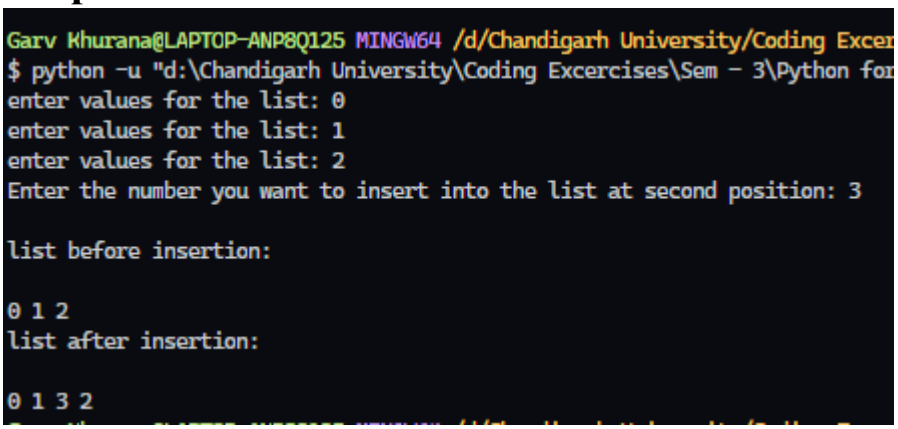

Program 2

Create an empty list and add 3 new items. After this insert again a new item specifically at 2nd place.

Code:

```
arr = []

for i in range(3):
    newInt = int(input("enter values for the list: "))
    arr.append(newInt)

newValue = int(
    input("Enter the number you want to insert into the list at second position: "))

print()
print("list before insertion: ")
print()
for i in arr:
    print(i, end=' ')


arr.insert(2, newValue)

print()
print("list after insertion: ")
print()
for i in arr:
    print(i, end=' ')
```

Output:



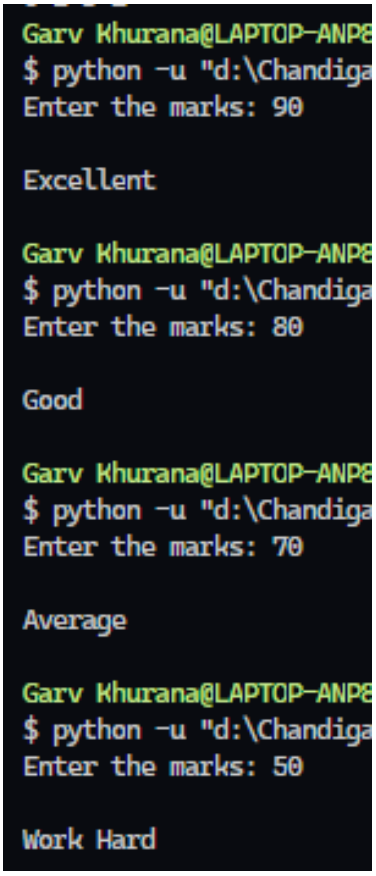
Program 3

WAP in which student will enter marks:
where EXCELLENT is 85 <= 100, GOOD 75 <= 85, AVERAGE 60 <= 75, WORK HARD 45 <= 60

Code:

```
marks = int(input("Enter the marks: "))

print()

if marks > 85 and marks <= 100:
    print("Excellent")
elif marks > 75 and marks <= 85:
    print("Good")
elif marks > 60 and marks <= 75:
    print("Average")
elif marks > 45 and marks <= 60:
    print("Work Hard")
else:
    print("Fail")
```

Output:



Learning Outcomes:

1. **Problem solving using python**
2. **Python data types**
3. **Python Lists, Tuples, and Dictionaries.**

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			