

## Practical

(a) Write a python script to demonstrate Global Keyword.

```
sample="yug"

def getname():
    sample="yatri" #local
    print("inside function:", sample)

getname()

print("outside function:", sample) #global
```

```
==== RESTART: C:/Users/stu
inside function: yatri
outside function: yug
>>> |
```

```
sample="yug"

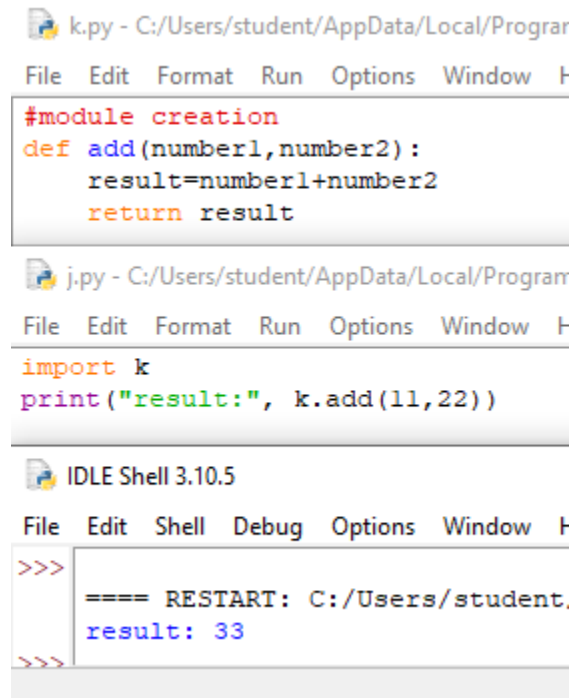
def getname():
    global sample
    sample="yatri" #local
    print("inside function:", sample)

getname()

print("outside function:", sample) #global
```

```
==== RESTART: C:/Users/stu
inside function: yatri
outside function: yatri
>>> |
```

(b) Write a python script to create User defined module.



The image shows three screenshots from the Python IDLE environment. The first screenshot shows a file named 'k.py' with a menu bar (File, Edit, Format, Run, Options, Window) and a code editor containing a function definition: `#module creation`, `def add(number1,number2):`,  `result=number1+number2`, and  `return result`. The second screenshot shows a file named 'j.py' with a similar menu bar and code editor containing `import k` and `print("result:", k.add(11,22))`. The third screenshot shows the IDLE Shell 3.10.5 with a menu bar (File, Edit, Shell, Debug, Options, Window) and an interactive prompt. It displays a restart message: `==== RESTART: C:/Users/student.` followed by the output `result: 33`.

```
k.py - C:/Users/student/AppData/Local/Programs/Python/Python310/IDLE
File Edit Format Run Options Window Help
#module creation
def add(number1,number2):
    result=number1+number2
    return result

j.py - C:/Users/student/AppData/Local/Programs/Python/Python310/IDLE
File Edit Format Run Options Window Help
import k
print("result:", k.add(11,22))


IDLE Shell 3.10.5
File Edit Shell Debug Options Window Help
>>>
==== RESTART: C:/Users/student.
result: 33
>>>
```

(c) Write a python script to demonstrate Math module with its functions.

```
import math

x=int(input("enter the number to perform operations:"))
print("factorial is", math.factorial(5))
x=math.sqrt(x)
print("sqrt of {} is ".format(x))
print("floor value is ", math.floor(x))
print("ceil value is ", math.ceil(x))

print("power {} **2 is {}".format(x,math.pow(x,2)))
```

 IDLE Shell 3.10.5

File Edit Shell Debug Options Window Help

```
>>>
==== RESTART: C:/Users/student/AppData/Local/Programs/Python
enter the number to perform operations:2
factorial is 120
sqrt of 1.4142135623730951 is
floor value is 1
ceil value is 2
power 1.4142135623730951 **2 is 2.0000000000000004
>>>
```

(d) Write a python script to demonstrate random module with its functions.



The image shows a sequence of four screenshots from the IDLE Shell 3.10.5, demonstrating the use of the random module.

**Script 1:** A Python script named k.py is shown. It imports the random module, generates a random integer between 5 and 15, and a random float.

```
import random

r1=random.randint(5,15)
print("random number is ",r1)

r2=random.random()
print("random number is ", r2)
```

**Execution 1:** The script is executed, showing the output of the first print statement: "random number is 13".

```
>>>
==== RESTART: C:/Users/student
random number is 13
>>>
```

**Script 2:** A new Python script is shown. It imports the random module, creates a list of integers and strings, and uses random.choice() to select an element from the list.

```
import random

list=[11,22,33,"yug","yatri"]
print("list is:",list)

print("random number :", random.choice(list))
```

**Execution 2:** The script is executed, showing the output of the first print statement: "list is: [11, 22, 33, 'yug', 'yatri']".

```
>>>
==== RESTART: C:/Users/student/AppData/Local/Programs/Python/Python310/IDLE Shell
list is: [11, 22, 33, 'yug', 'yatri']
random number : 11
>>>
```

**Script 3:** A new Python script is shown. It imports the random module, creates a list of integers and strings, and uses random.shuffle() to shuffle the list.

```
import random

list=[11,22,33,"yug","yatri"]
print("list is:",list)


random.shuffle(list)
print("random number after shuffle :", list)
```

**Execution 3:** The script is executed, showing the output of the first print statement: "list is: [11, 22, 33, 'yug', 'yatri']".

```
>>>
==== RESTART: C:/Users/student/AppData/Local/Programs/Python/Python310/IDLE Shell
list is: [11, 22, 33, 'yug', 'yatri']
random number after shuffle : ['yatri', 11, 22, 'yug', 33]
>>>
```

```
from random import *

mygrp=[11,22,"yug", "yatri" ,True]
print(sample(mygrp,3))
```

 IDLE Shell 3.10.5


```
File Edit Shell Debug Options Window Help
>>>
===== RESTART: C:/Users/student/App
[22, 'yatri', True]
>>>
```

```
import random

print("diff number")
for i in range(5):
    print(random.randint(1,100))

print("same numbers")
for i in range(5):
    random.seed(1)

    print(random.randint(1,100))
```

 IDLE Shell 3.10.5

```
File Edit Shell Debug Options Window Help
diff number
12
45
4
41
28
same numbers
18
18
18
18
18
>>>
```