

```
def multiply(a,b):  
    return a*b  
  
def add(a,b):  
    return a+b  
  
def sub(a,b):  
    return a-b  
  
def div(a,b):  
    return a/b  
  
def floordiv(a,b):  
    return a//b
```

# applied module

November 4, 2023

1. Establish connection between MySQL and Python. • Create a new database. • Create new table customers with name and address. • Insert values into that table. • Retrieve the values using a query.

```
[22]: import mysql.connector
conn = mysql.connector.connect(user = 'root', host = 'localhost', passwd='rootroot')
print(conn)
crsr=conn.cursor()
crsr.execute('create database python')
```

<mysql.connector.connection\_cext.CMySQLConnection object at 0x00000226062A3BF0>

```
[28]: crsr.execute('use python')
crsr.execute('create table customers(id INT PRIMARY KEY AUTO_INCREMENT, name VARCHAR(50), address VARCHAR(100))')
```

```
[35]: query="insert into customers(name,address) values (%s,%s)"
crsr.
    ↳ executemany(query, (("nikita", "jabalpur"), ("shiavam", "jabalpur"), ("rohit", "bhopal")))
conn.commit()
```

```
[ ]: query="select * from customers"
crsr.execute(query)
result=
```

2. Write a python program to implement multiple exceptions with else and Finally statements.

```
[9]: d= int(input("Enter dividend"))
a= int(input("Enter divisor"))
i=10
try:
    c=d/a
    print(i)
    l=[100,200,300,400]
    print(l[5])
except ZeroDivisionError as e:
    print(e)
except NameError as e:
```

```

    print(e)
except IndexError as e:
    print(e)
else:
    print("no error found")
finally:
    print("this will surely print")

```

Enter dividend 10

Enter divisor 2

10

list index out of range

this will surely print

3. Write a python program to implement a simple calculator with a user defined module. Your module should have the functions for all arithmetic operations Read the operands from the user.

```

[2]: import mymodule
a=int(input("enter number1"))
b=int(input("enter number2"))
c=mymodule.multiply(a,b)
print("The multiplication of ",a,"and b", "is",c)
d=mymodule.add(a,b)
print("The sum of ",a,"and b", "is",d)
c=mymodule.sub(a,b)
print("The difference of ",a,"and b", "is",c)
c=mymodule.div(a,b)
print("The division of ",a,"and b", "is",c)
c=mymodule.floordiv(a,b)
print("The floordivision of ",a,"and b", "is",c)

```

enter number1 10

enter number2 2

The multiplication of 10 and b is 20

The sum of 10 and b is 12

The difference of 10 and b is 8

The division of 10 and b is 5.0

The floordivision of 10 and b is 5

4. Find words in a sentence with more than 4 letters using list comprehension.

```

[14]: s="hello everyone come to dubai"
l=s.split()
n=[i for i in l if len(i)>4 ]
print(n)

```

['hello', 'everyone', 'dubai']

5. Find all of the numbers from 1-1000 that are divisible by 7 using list comprehension.

```
[15]: l=[i for i in range(1,1000) if i%7==0]
      print(l)
```

```
[7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84, 91, 98, 105, 112, 119, 126, 133,
140, 147, 154, 161, 168, 175, 182, 189, 196, 203, 210, 217, 224, 231, 238, 245,
252, 259, 266, 273, 280, 287, 294, 301, 308, 315, 322, 329, 336, 343, 350, 357,
364, 371, 378, 385, 392, 399, 406, 413, 420, 427, 434, 441, 448, 455, 462, 469,
476, 483, 490, 497, 504, 511, 518, 525, 532, 539, 546, 553, 560, 567, 574, 581,
588, 595, 602, 609, 616, 623, 630, 637, 644, 651, 658, 665, 672, 679, 686, 693,
700, 707, 714, 721, 728, 735, 742, 749, 756, 763, 770, 777, 784, 791, 798, 805,
812, 819, 826, 833, 840, 847, 854, 861, 868, 875, 882, 889, 896, 903, 910, 917,
924, 931, 938, 945, 952, 959, 966, 973, 980, 987, 994]
```

6. Write a Python program to sort a tuple by its float element, using lambda function. Sample data: (('item1', '12.20'), ('item2', '15.10'), ('item3', '24.5')) Expected Output: (('item3', '24.5'), ('item2', '15.10'), ('item1', '12.20'))

```
[20]: Sampledata=(('item1', '12.20'), ('item2', '15.10'), ('item3', '24.5'))
      print( sorted(Sampledata, key=lambda a: float(a[1]), reverse=True))
```

```
[('item3', '24.5'), ('item2', '15.10'), ('item1', '12.20')]
```

7. Write a python program to read a list of numbers and if an even number is there calculate the square and print the converted list. Use lambda and map functions.

```
[19]: l=eval(input("Enter a list of number"))
      n=map((lambda x : x*x if x%2==0 else x),l)
      l=list(n)
      print(l)
```

Enter a list of number [1,2,3,4,5,6]

```
[1, 4, 9, 16, 25, 36]
```