

P E S University
Department of Computer Science & Engineering
Session : Aug-Dec 2019

Introduction to Computing using Python Laboratory(UE19CS102)

Week 14– OO,Exceptions and Files

1	<p>Create a Student class and initialize it with name and roll number. Create methods to :</p> <ol style="list-style-type: none">1. Display - It should display all informations of the student.2. setAge - It should assign age to student3. setMarks - It should assign marks to the student. <p>Write a test script to test the class with its instance(s).</p> <p>Solution:</p> <pre>class Student(): def __init__(self,name,roll): self.name = name self.roll= roll def display(self): print (self.name) print (self.roll) def setAge(self,age): self.age=age def setMarks(self,marks): self.marks = marks a=Student("hello",123) a.display()</pre>
2	<p>Define a user defined type named Shape. Derive a type Square from Shape. The Square takes length as an argument. Add a function area() in both the types. Shape's area is 0 by default. Write the implementation for the following interface.</p> <pre>aSquare= Square(3) print (aSquare.area()) aShape=Shape() print(aShape.area())</pre> <p>Solution:</p> <pre>class Shape: def __init__(self)://optional pass</pre>

	<pre> def area(self): return 0 class Square(Shape): def __init__(self, l): Shape.__init__(self) self.length = l def area(self): return self.length*self.length aSquare= Square(3) print (aSquare.area()) </pre>
3	<p>Write a program to find reciprocal of elements in given list,L=['a',0,2] and handle the exception when you are finding reciprocal for the values 0 and 'a'.</p> <p>Solution:</p> <pre> randomList = ['a', 0, 2] for entry in randomList: try: print("The entry is", entry) r = 1/int(entry) break except: print("Next entry.") print() print("The reciprocal of",entry,"is",r) </pre>
4	<p>Write a program to count the number of capital letters and small letters in a file. Write the output to a separate file.</p> <p>Solution:</p> <pre> fh=open("a.txt") fx=open("b.txt","w") count = 0 lcount = 0 text = fh.read() for character in text: if character.isupper(): count += 1 elif character.islower(): lcount+=1 print(count,lcount,file=fx) </pre>

