

BRAC UNIVERSITY
Department of Computer Science and Engineering
CSE111: Programming Language II
Lab Final Examination (Reverse Engineering)

Duration - 30 minutes

SET A

Fall 2022

Create **Ordered** class inherited from **Linear** class. You must use Encapsulation, Inheritance and Polymorphism **as much as possible**. [CO6] **(10 Marks)**

Driver Code (With given class)	Output
<pre> class Linear: def __init__(self, a, b): self.result = {0: 1} self.__a = 5 self.__b = b def find(self): self.result[1] = self.geta() + self.getb() return self.result[1] def geta(self): return self.__a def getb(self): return self.__b def seta(self, a): self.__a = a def setb(self, b): self.__b = b def __str__(self): return 'Result: ' + str(self.result) #Write your code here a = Ordered(-1, -3, 3) a.find() print(a) print("======(01)=====") b = Ordered(1, 2, 2) b.find() print(b) print("======(02)=====") print(a + b) print("======(03)=====") </pre>	<pre> Upto order:3 Result: {0: 1, 1: -4, 2: 16, 3: -64} ======(01)===== Upto order:2 Result: {0: 1, 1: 3, 2: 9} ======(02)===== Upto order:3 Result: {0: 2, 1: -1, 2: 25, 3: -64} ======(03)===== </pre>
	<p>Explanation</p> <p>b = Ordered(1, 2, 2) Order 0 = $(1 + 2)^0 = 1$ Order 1 = $(1 + 2)^1 = 3$ Order 2 = $(1 + 2)^2 = 9$ So, the output = {0: 1, 1: 3, 2: 9} and upto order 2</p>