**Netaji Subhash Engineering College**

**Department of Computer Science & Engineering**

B. Tech CSE 2nd Year 3rd Semester

**2021-2022**

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**Name of the Course : IT Workshop**

**Course Code : PCC-CS393**

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**Class Roll No : 14**

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**Date of Experiment : 03.12.2021**

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**Assignment No.: 27**

**Problem Statement: Write a program to find the maximum and minimum of a list of numbers without using built-in functions.**

**Python Code:**

**l1 = [5,15,20,16,30,25,21]**

**min\_ele=l1[0] max\_ele=l1[0] for i in range (1, len(l1)): if l1[i]<min\_ele: min\_ele=l1[i] if l1[i]>max\_ele: max\_ele=l1[i]**

**print ('Minimum element in the list' ,l1,'is',min\_ele) print ('Maximum element in the list' ,l1,'is',max\_ele)**

**Sample Output(s):**

**Minimum element in the list [5, 15, 20, 16, 30, 25, 21] is 5**

**Maximum element in the list [5, 15, 20, 16, 30, 25, 21] is 30**

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**▪ Assignment No.: 28**

**Problem Statement: Write a program to multiply two matrices as nested lists.**

**Python Code:**

**A= [[2,4,7],**

**[4,5,8],**

**[3,2,1]]**

**B= [[1,3,5,2],**

**[3,4,7,8], [4,2,5,6]]**

**result= [[sum (a\*b for a, b in zip (A\_row, B\_col))**

**for B\_col in zip(\*B)] for A\_row in A] for r in result:**

**print(r)**

**Sample Output(s):**

**[42, 36, 73, 78] [51, 48, 95, 96]**

**[13, 19, 34, 28]**

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**▪ Assignment No.: 29**

**Problem Statement: Write a program to find the union of two lists.**

**Python Code:**

**def Union (L1, L2): L3=L1+L2**

**return L3**

**#Driver code**

**L1= [2,5,10,20,74,45,62,50,32] L2= [20,24,31,38,39,75,15,72,40] print (Union (L1, L2))**

**Sample Output(s):**

**[2, 5, 10, 20, 74, 45, 62, 50, 32, 20, 24, 31, 38, 39, 75, 15, 72, 40]**

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**▪ Assignment No.: 31**

**Problem Statement: Write a program to create a list from two given lists ‘list 1’ and**

**‘list 2’ of numbers such that it contains the numbers that are present in ‘list 2’ but not in ‘list 1’.**

**Python Code:**

**L1= [1,3,5,7,9,11]**

**L2= [15,17,19,21,23,25]**

**L=L2**

**print(L)**

**Sample Output(s):**

**[15, 17, 19, 21, 23, 25]**

**▪ Assignment No.: 32**

**Problem Statement: Write a program to find the distinct pair of numbers whose product is odd from a list of integers.**

**Python Code:**

**def odd\_product(nums): for i in range(len(nums)): for j in range(len(nums)): if i! = j:**

**product=nums[i]\*nums[j] if product & 1: return True**

**return False**

**S1= [2,4,6,8] S2= [1,6,4,7,8] print (S1, odd\_product(S1)) print (S2, odd\_product(S2))**

**Sample Output(s):**

**[2, 4, 6, 8] None**

**[1, 6, 4, 7, 8] True**