

**GANPAT UNIVERSITY**  
**U. V. PATEL COLLEGE OF ENGINEERING**  
**B.Tech CE/IT Semester IV**  
**2CEIT404: Python Programming**

**Practical-4: Lists and Tuples**

1. Explain difference between insert, append and extend operations on list. Write a program to create and initialize a list with your name, enrollment number, age, branch and result. Perform insert, remove, update, append and extend operation on list.
2. Write a program to search an element, find maximum & minimum value from the list.
  1. Using inbuilt function
  2. Using for loop
3. Create a program that asks the user for a number and then prints out a list of all the divisors of that number.
4. WAP to sort element in list
  1. In same list
  2. Create sorted copy of original list & print both.
  3. Sort without any built-in function
5. Take two lists, say for example these two:  
a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]  
b = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]  
and write a program that returns a list that contains only the elements that are common between the lists (without duplicates). Make sure your program works on two lists of different sizes.
6. Write a Python program which takes a list and returns a list with the elements "Shifted left by one position" so [1, 2, 3] yields [2, 3, 1].  
Example: [11, 12, 13] → [12, 13, 11]
7. Write a program which takes a comma separated string from user & store each string which separated by comma in list & display list.
8. Write a program to create and initialize the tuple. Also remove 3rd element from tuple.
9. Create a tuple with name courses and initialize it with JAVA, PHP, C#, Android. Insert two items HTML and Python at the 3rd position in tuple.
10. Write a python program which shows the effect of mutability.
11. Write a program to create a regular expression which verifies whether given mobile number is valid or not.