

Practical Session 3

Topic: Working with Lists and Tuples, If Statements

Date: 22/07/2025

Solve the following problems using Jupyter Notebook. Please write the following for each of the programming assignments.

1. The problem statement
2. The entire program
3. The sample input
4. The sample output

Please get the program report signed by the instructor.

Working with Lists and Tuples, If Statements

1. Think of at least five different animals that have a common characteristic. Store the names of these animals in a list, and then use a for loop to print out the name of each animal.
2. Use a for loop to print the numbers from 1 to 20, inclusive.
 - a. Use `min()` and `max()` to make sure your list actually starts at 1 and ends at 20. Use `sum()` function to see the sum of the first 20 numbers.
 - b. Use the third argument of the `range()` function to make a list of the odd numbers from 1 to 20. Use a for loop to print each number.
3. Take the list you created in Q. No. 2 and use the `slice` function to print the first three numbers, three numbers from the middle, and the last three numbers in the list.
4. Think of five simple foods and store them in a tuple. Use a for loop to print each food.
 - a. Try to modify the items and make sure that Python rejects the change.
 - b. How do you modify the tuple to get two changed foods?
5. Write an `if-elif-else` chain that determines a person's stage of life. Set a value for the variable `age` and then:
 - a. `age < 2` print `baby`
 - b. `age >= 2` and `< 4` print `toddler`
 - c. `age >= 4` and `< 13` print `kid`
 - d. `age >= 13` and `< 20` print `teenager`
 - e. `age >= 20` and `< 65` print `adult`
 - f. `age >= 65` print `elder`
6. Create a list to store numbers 0 to 20 with a common difference of 0.5. Create another list to store numbers 0 to 20 with a common difference of 1.
 - a. Check if the number 4.5 is present in both the list using if statement without for loop.
 - b. Print the common numbers from both the list using only one for loop.

- c. Remove all the items from the second list and check if it is empty by not using any operator.