Problem Statements: Data Structures

1. Write a program to separate odd and even integers in separate lists.
2. Write a program to find the second largest element in a list.
3. Create a list of elements like: x = [45, 67, 12, ‘Hello’, 23.45, ‘World’] and oerform following operations
    1. Extract only string values from this list.
    2. Create a new list with strings in upper case.
    3. Find the addition of integer values
    4. Check that the value 56 is present in it or not.
    5. Print the list in reverse order.
    6. Delete the string ‘Hello’ from it.
    7. Insert a new value of 36 at 5^{th} position in list.
    8. Count total number of elements in list now.
    9. Extract the values from 2^{nd} index to 5^{th} index.
    10. Append [34, ‘Pune’] to this list.
    11. Delete the last element from list.
4. Write a Python program to check a list is empty or not.
5. Write a Python program to print a specified list after removing the 0th, 4th and 5th elements.
   Sample List : ['Red', 'Green', 'White', 'Black', 'Pink', 'Yellow']
   Expected Output : ['Green', 'White', 'Black']
6. Write a Python program to create a list by concatenating a given list which range goes from 1 to n.
   Sample list : ['p', 'q']
   n =5
   Sample Output : ['p1', 'q1', 'p2', 'q2', 'p3', 'q3', 'p4', 'q4', 'p5', 'q5']
7. Create a tuple of elements with 5 float values in it and perform following operations.
    1. Print the data in sorted manner.
    2. Check to see that the element 50 is present in it.
    3. Convert this tuple in set.
8. Create a dictionary of elements: {‘a’: ‘apple’, ‘b’: ‘ball’, ‘c’: ‘cat’, ‘d’: ‘doll’, ‘k’: ‘king’} and perform following operations.

1. Access the data at key ‘k’.
2. Add a new values ‘z’: ‘zebra’
3. Replace the contents of ‘d’ as ‘dog’
4. Print all the values from this dictionary.
5. Find the length of this dictionary.