**EXERCISES ON LIST (26.08.2024)**

**1. create a list called fruits with the following items: "apple", "banana", "cherry", "date", and "elderberry".Print the list.**

fruits=["apple","banana","cherry","date","elderberry"]  
print(fruits)  
 **2.Access List Elements  
Print the first and last items from the fruits list.**

first\_ele=fruits[0]  
last\_ele=fruits[-1]  
print(first\_ele)  
print(last\_ele)  
  
**Print the second and fourth items from the list.**  
second\_ele=fruits[1]  
fourth\_ele=fruits[3]  
print(second\_ele)  
print(fourth\_ele)  
  
**3.Modify a List  
Replace "banana" in the fruits list with "blueberry".  
Print the modified list.**  
fruits[1]="blueberry"  
print(fruits)  
  
**4.Add and Remove Elements  
Append "fig" and "grape" to the fruits list.  
Print the final list.**  
fruits.append("fig")  
fruits.append("grape")  
  
**Remove "apple" from the list.**  
fruits.remove("apple")  
print(fruits)  
  
**5.Slice a List  
Slice the first three elements from the fruits list and assign them to a new list called first\_three\_fruits**. **Print first\_three\_fruits.**

first\_three\_fruits=fruits[0:3]  
print(first\_three\_fruits)  
  
**6. Find List Length  
Find and print the length of the fruits list.**  
len(fruits)  
print("Length of the fruits list:",len(fruits))  
  
**7.List Concatenation  
Create a second list called vegetables with the following items: "carrot", "broccoli", "spinach".**vegetables=["carrot", "broccoli", "spinach"]  
  
**Concatenate the fruits and vegetables lists into a new list called food.  
Print the food list.**  
food=fruits+vegetables  
print("Food List:",food)  
  
**8. Loop Through a List  
Loop through the fruits list and print each item on a new line.**for fruit in fruits:  
 print(fruit)  
  
**9. Check for Membership  
Check if "cherry" and "mango" are in the fruits list. Print a message for each check.**  
if "cherry" in fruits:  
 print("Cherry is present in the fruits list")  
else:  
 print("Cherry is not present in the fruits list")  
if "Mango" in fruits:  
 print("Mango is present in the fruits list")  
else:  
 print("Mango is not present in the fruits list")  
  
**10.List Comprehension  
Use list comprehension to create a new list called fruit\_lengths that contains the lengths of each item in the fruits list.**Print the fruit\_lengths list.  
fruit\_lengths=[len(x) for x in fruits]  
print("Fruit Lengths:",fruit\_lengths)  
  
**11.Sort a List  
Sort the fruits list in alphabetical order and print it.**  
fruits.sort()  
print("Fruits in alphabetical order:",fruits)  
  
**Sort the fruits list in reverse alphabetical order and print it.**fruits.sort(reverse=True)  
print("Fruits in reverse alphabetical order:", fruits)  
  
**12.Nested Lists  
Create a list called nested\_list that contains two lists: one with the first three fruits and one with the last three fruits**.  
nested\_list=[fruits[:3],fruits[3:]]  
print(nested\_list)

**Access the first element of the second list inside nested\_list and print it.**  
first\_ele\_of\_second\_list=nested\_list[1][0]  
print("First element of the second list:", first\_ele\_of\_second\_list)

**13.Remove Duplicates  
Create a list called numbers with the following elements: [1, 2, 2, 3, 4, 4, 4, 5].  
Remove the duplicates from the list and print the list of unique numbers.**numbers=[1, 2, 2, 3, 4, 4, 4, 5]  
unique\_numbers=list(set(numbers))  
print("List of Unique numbers:",unique\_numbers)  
  
**14.Split and Join Strings  
Split the string "hello, world, python, programming" into a list called words using the comma as a delimiter.**  
given\_string="hello, world, python, programming"  
words=given\_string.split(",")  
print(words)  
  
**Join the words list back into a string using a space as the separator and print it.**  
join\_words=" ".join(words)  
print("Joined String:",join\_words)