**Classwork 3**

**Classwork\_1(lists)File**

1)

n = int(input())  
numbers = []  
for i in range(1, n + 1):  
 numbers.append(i)  
print(numbers)

2)

n = int(input())  
for i in range(n):  
 list = [chr(ord('a') + i) for i in range(n)]  
print(list)

3)

numbers1 = [1, 2, 3]  
numbers2 = [6]  
numbers3 = [7, 8, 9, 10, 11, 12, 13]  
result = numbers1 + (numbers2 \* 9) + numbers3  
print(result)

4)

n = int(input())  
input\_numbers = [int(input()) for i in range(n)]  
result\_list = input\_numbers[::2]  
print(result\_list)

5)

n = int(input())  
strings\_list = [input() for \_ in range(n)]  
k = int(input())  
result\_text = strings\_list[k-1]  
print(result\_text)

6)

n = int(input())  
strings\_list = [input() for \_ in range(n)]  
characters\_list = []  
for i in range(n):  
 characters\_list.extend(strings\_list[i])  
print(characters\_list)

7)

n = int(input())  
lines\_list = [input() for \_ in range(n)]  
k = int(input())  
search\_queries = [input() for \_ in range(k)]  
for line in lines\_list:  
 if all(query in line for query in search\_queries):  
 print(line)

8)

n = int(input())  
negative\_numbers = []  
zero\_numbers = []  
positive\_numbers = []  
for \_ in range(n):  
 num = int(input())  
 if num < 0:  
 negative\_numbers.append(num)  
 elif num == 0:  
 zero\_numbers.append(num)  
 else:  
 positive\_numbers.append(num)  
for num in negative\_numbers:  
 print(num)  
for num in zero\_numbers:  
 print(num)  
for num in positive\_numbers:  
 print(num)

**Lists and Tuples**1)

fav\_fruits = []  
for i in range(5):  
 fruit = input()  
 fav\_fruits.append(fruit)  
print(fav\_fruits)

2)

or\_list = [1,2,3,4,5,6,7,8,9,10]  
print(or\_list[2:7])

3)

num1 = float(input())  
num2 = float(input())  
num3 = float(input())  
numbers\_tuple = (num1, num2, num3)  
print(numbers\_tuple)

4)

my\_list = [5, 2, 8, 3, 1]  
new\_item = 7  
my\_list.append(new\_item)  
my\_list.pop(0)  
my\_list.sort()  
print("Modified list:", my\_list)

5)

my\_list = [5, 2, 8, 3, 1]  
new\_item = int(input())  
if new\_item in my\_list:  
 print("Item in list")  
else:  
 print("Item not in list")

6)

my\_list = [1, 2, 3, 4, 5]  
print(list(reversed(my\_list)))

7)

my\_tuple = (1, 2, 3, 4)  
num1, num2, num3, num4 = my\_tuple  
print(num1)  
print(num2)  
print(num3)  
print(num4)

8)

num = input("Enter numbers separated by spaces: ")  
numbers\_list = list(map(int, num.split()))  
max\_num = max(numbers\_list)  
min\_num = min(numbers\_list)  
print("Max", max\_num)  
print("Min", min\_num)

9)

list1 = input().split()  
list2 = input().split()  
result\_list = list1 + list2  
print("Concatenated List:", result\_list)

10)

user\_input = input("Enter a list of numbers separated by spaces: ")  
numbers\_tuple = tuple(map(int, user\_input.split()))  
print(numbers\_tuple)

**Sets and Dictionaries**

1)

user\_input = input("Enter a list of numbers separated by spaces: ")  
numbers\_set = set(map(int, user\_input.split()))  
print(numbers\_set)

2)

# Define two sets  
set1 = {1, 2, 3, 4, 5}  
set2 = {3, 4, 5, 6, 7}  
union\_set = set1.union(set2)  
intersection\_set = set1.intersection(set2)  
difference\_set = set1.difference(set2)  
symmetric\_difference\_set = set1.symmetric\_difference(set2)  
print("Set 1:", set1)  
print("Set 2:", set2)  
print("Union Set:", union\_set)  
print("Intersection Set:", intersection\_set)  
print("Difference Set", difference\_set)  
print("Symmetric Difference Set:", symmetric\_difference\_set)

3)

my\_dict = {}  
for i in range(3):  
 key = input(f"Enter key {i + 1}: ")  
 value = input(f"Enter value for {key}: ")  
 my\_dict[key] = value  
print(my\_dict)

4)

my\_dict = {'name': 'Yerassyl', 'age': 18, 'city': 'Astana'}  
user\_key = input()  
if user\_key in my\_dict:  
 print("we have such key")  
else:  
 print("we don't have such key")

5)

user\_string = input()  
char\_frequency = {}  
for char in user\_string:  
 char\_frequency.setdefault(char, 0)  
 char\_frequency[char] += 1  
for char, frequency in char\_frequency.items():  
 print(f"'{char}': {frequency}")

6)

my\_set = {1, 2, 3, 4, 5}  
zxc = int(input())  
if zxc in my\_set:  
 print("Exist")  
else:  
 print("Not exist")

7)

my\_dict = {'name': 'Yerassyl', 'age': 18, 'city': 'Astana'}  
for value in my\_dict.values():  
 print(value)

8)

dict1 = {'name': 'Yerassyl', 'age': 18, 'city': 'Astana'}  
dict2 = {'b\_year': 2006, 'b\_day': '17 april'}  
merged\_dict = {\*\*dict1, \*\*dict2}  
print(merged\_dict)

9)

dict1 = {'name': 'Yerassyl', 'age': 18, 'city': 'Astana'}  
key\_to\_remove = input()  
del dict1[key\_to\_remove]  
print(dict1)

10)

user\_input = input()  
unique\_elements\_set = set(user\_input)  
print(unique\_elements\_set)