1.

import re

def track\_login\_attempts():

for i in range(5):

username = input("Enter username: ")

pattern = r'^(?=.\*[A-Z])(?=.\*[a-z])(?=.\*[0-9]).{8,}$'

if re.match(pattern, username):

print("Login Succeeded")

break

else:

print(f"Login Failed,{5-i-1} attempts more")

else:

print("oops!no more attempts")

track\_login\_attempts()

2.

n=int(input("Enter the number of elements in the list:"))

list1=[]

for i in range(n):

list1.append(int(input(f"enter the element")))

list2=[]

dup=[]

for i in list1:

if i not in list2:

list2.append(i)

elif i in list2:

dup.append(i)

print("the list after removing duplicates is:",list2)

list2.sort(reverse=True)

print("the list that is sorted in descending order is:",list2)

3.

num1=int(input("enter the number of elements to be appended in list

1"))

num2=int(input("enter the number of elements to be appended in list

2"))

lst1=[]

lst2=[]

for i in range(num1):

lst1.append(int(input("enter the element to be appenden in list1")))

for j in range(num2):

lst2.append(int(input("enter the element to be appenden in list1")))

common=[]

for i in lst1:

if i in lst2:

common.append(i)

print(f"the common elements in the two lists are {common}")

4.

num=int(input("Enter a number:"))

count=0

for i in str(num):

count+=int(i)

print(f"the sum of digits in the given number is: {count}")

5.

user\_input = input("Enter a string: ")

words = user\_input.split()

word\_count = len(words)

print(f"The number of words in the given string is: {word\_count}")

6.

class BankAccount:

def \_\_init\_\_(self, account\_holder, initial\_balance=0):

self.account\_holder = account\_holder

self.balance = initial\_balance

def deposit(self, amount):

if amount > 0:

self.balance += amount

print(f"Deposited: {amount}. New Balance: {self.balance}")

else:

print("Deposit amount must be positive.")

def withdraw(self, amount):

if amount > self.balance:

print("Insufficient balance.")

elif amount <= 0:

print("Withdrawal amount must be positive.")

else:

self.balance -= amount

print(f"Withdrawn: {amount}. New Balance: {self.balance}")

def check\_balance(self):

print(f"Current Balance: {self.balance}")

account = BankAccount("KRISHNA", 1000)

account.check\_balance()

account.deposit(500)

account.withdraw(300)

account.withdraw(1500)

7.

import re

email = input("Enter an email address: ")

pattern = r'^[a-zA-Z0-9.\_%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$'

if re.match(pattern, email):

print("Valid email address.")

else:

print("Invalid email address.")

8.

import re

text = input("Enter the text: ")

pattern = r'\b\d{10}\b|\b(?:\d{3}-\d{3}-\d{4})\b|\b(?:\(\d{3}\)

\d{3}-\d{4})\b'

phone\_numbers = re.findall(pattern, text)

if phone\_numbers:

print("Extracted phone numbers:", phone\_numbers)

else:

print("No phone numbers found.")

9.

import re

text = input("Enter the text: ")

pattern = r'#\w+'

hashtags = re.findall(pattern, text)

if hashtags:

print("Extracted hashtags:", hashtags)

else:

print("No hashtags found.")

10.

numbers = [5, 2, 9, 1, 5, 6]

for i in range(len(numbers)):

for j in range(len(numbers) - i - 1):

if numbers[j] > numbers[j + 1]:

numbers[j], numbers[j + 1] = numbers[j + 1], numbers[j]

print("Sorted list:", numbers)