Solutions to LAB Practice Questions

UNIT I	
1.	Python Program to Add Two Numbers a=int(input("Enter First Number ")) b=int(input("Enter Second Number ")) s = a + b print("Sum =",s)
2.	Python Program to Swap Two Variables a=int(input("Enter First Number ")) b=int(input("Enter Second Number ")) print("Before swapping") print("a =",a,", b =",b) a,b=b,a print("After swapping") print("a =",a,", b =",b)
3.	Python Program to Convert Celsius To Fahrenheit F=9*C/5+32 C = float(input("Enter temperature in Celius ")) F = 9*C/5 + 32 print("Temperature in Fahrenheit =",F)
4.	Python program to convert all units of time into seconds. (s=day*24*3600+hrs*3600+mins*60) d = int(input("Enter number of days ")) h = int(input("Enter time in hours ")) m = int(input("Enter time in minutes ")) s = d*24*3600 + h*3600 + m*60 print("Time in seconds =",s)
UNIT II	

5.	WAP to compute the roots of the quadratic equation.
	
	a = int(input("Enter value of a "))
	b = int(input("Enter value of b "))
	c = int(input("Enter value of c "))
	D = b*b - 4*a*c
	if D==0:
	  print("Roots are real and equal.")
	  x1=x2=-b/(2*a)
	  print("x1 =",x1,", x2 =",x2)
	elif D>0:
	  print("Roots are real and distints.")
	  D1 = D**0.5
	  x1 = (-b + D1)/(2*a)
	  x2 = (-b - D1)/(2*a)

	print("x1 =",x1,", x2 =",x2) else: print("Roots are imaginary.")

6.	WAP to enter a character and then determine whether it is a vowel,consonants, or a digit.
	
	ch = input("Enter any alphabet or digit ")
	if ch in 'aeiouAEIOU':
	print(ch,"is a vowel.")
	elifch in '0123456789':
	print(ch,'is a digit.')
	else:
	print(ch,'is a consonant.')

7.	WAP to compute the sum of factorial of the first n natural number. n = int(input("Enter number of terms ")) s=0 f=1 for i in range(1,n+1): f = f*i s = s + f print("Sum of series =",s)

8.	WAP to reverse the given number. Also check whether the given number is in palindrome or not.
	
	num = int(input("Enter number "))
	rev=0
	n=num
	while n>0:
	rem = n%10
	rev = rev*10 + rem
	n = n//10
	print("Reverse number =",rev)
	if rev == num:
	print(num,"is in palindrome.")
	else:
	print(num,"is not in palindrome.")

9.	WAP to find the sum of odd and even numbers separately within a given range.
	
	n = int(input("Enter number of terms "))
	even=0
	odd=0
	for i in range(1,n+1):
	if i%2==0:
	even=even+i
	else:
	odd=odd+i
	print("EVEN =",even)

	print("ODD =",odd)

10.	WAP to display all the prime numbers in given range.
	
	M = int(input("Enter first number "))
	N = int(input("Enter last number "))
	print("Prime numbers from ",M,"to",N,"are")
	for n in range(M,N+1):
	  flag=0
	  for i in range(2,n//2):
	  if n%i==0:
	  flag=1
	  break
	  if flag==0:
	  print(n,end=' ')

11.	WAP to compute the sum of Fibonacci series up to n^{th} term.
	
	n = int(input("Enter number of terms "))
	a=0
	b=1
	s=a+b
	for i in range(3,n+1):
	  c=a+b
	  s=s+c
	  a=b
	  b=c
	print("Sum of Fibonacci series upto ",n,"thterms",s)

12.	WAP to display all the factors of a number.
	
	n = int(input("Enter number "))
	print("Factors from 1 to",n,"are")
	for i in range(1,n+1):
	  if n%i==0:
	  print(i,end=' ')

13.	WAP to display the following pattern.
	
	n = int(input("Enter n: "))
	for i in range(1,n):
	  for j in range(1,n-i):
	  print(' ',end=' ')
	  for j in range(1,2*i):
	  print("*",end=' ')

				*				
			*	*	*			
		*	*	*	*	*		
	*	*	*	*	*	*	*	
*	*	*	*	*	*	*	*	*

	print()
	UNIT III

14.	WAP to find the largest of three numbers using user defined function.
	def myLargest(x,y,z):
	  if x>y and x>z:
	  return x
	elif y>z:
	  return y
	  else:
	  return z
	a=int(input("Enter First Number "))
	b=int(input("Enter Second Number "))
	c=int(input("Enter Third number "))
	print("Largest number =",myLargest(a,b,c))

15.	WAP to compute the exponential of number w.r.t. another number.
	
	def myexp(x,y):
	  if y==0:
	  return 1
	  else:
	  return x*myexp(x,y-1)
	a=int(input("Enter Base Number "))
	b=int(input("Enter Exponent Number "))
	print(a,"^",b,'=',myexp(a,b))

16.	WAP to multiply two numbers using lambda function. mu = lambda x,y:x*y a=int(input("Enter First Number ")) b=int(input("Enter Second Number ")) print(mu(a,b))
17.	
	UNIT IV

18.	WAP to find min, max and average of elements of a list having numeric data
	n = int(input("How many numbers: "))
	a = []
	sum=0
	for i in range(0,n):
	  x = int(input("Enter number "))
	  a.insert(i,x)
	  sum = sum+x
	
	t=max(a)
	print("Maximum element in the list is : %d "%(t))
	print("Minimum element in the list is :", min(a))
	print("Average = ", sum/n)

19.	WAP to print all even numbers of a list using list comprehension a = input("Enter elements separated by a comma:").split(',') b = [int(x) for x in a if int(x)%2 == 0]

	print("Even numbers in the list: ",b)

20.	WAP to find occurrence of each characters in string.
	string = input("Please enter sentence: ")
	freq = list(string)
	freq.sort()
	
	empty = []
	
	for i in range(0, len(freq)):
	count = string.count(freq[i])
	if freq[i] not in empty:
	empty.append(freq[i])
	print(f"'{freq[i]}'\t{count}")
	
	print(empty)

21.	WAP that inverts a dictionary. That is, it makes key of one dictionary value of another and vice versa. keys = input("Enter elements separated by ,(comma) for keys: ").split(',') values = input("Enter elements separated by ,(comma) for values: ").split(',') dictionary = {keys[i]:values[i] for i in range(len(keys))} inverted = {values[i]:keys[i] for i in range(len(keys))} print("Dict : ",dictionary) print("Inverted Dict :",inverted)
UNIT V	
22.	WAP to count number of words, lines, and characters in a text file. Code given ********** lineCount+=1 words = line.split() wordCount = wordCount + len(words) for i in line: charCount+=1 ********** Code given
23.	Python Program to handle divide by zero exception
24.	WAP to Implement Sequential search (Linear search) to find an item in the list
25.	WAP to sort elements of a list using Bubble sort.