Lab Report-05:

1.. Password Validator: Write a Python program that takes a password as input and checks if it meets the following criteria: at least 8 characters long, contains both uppercase and lowercase letters, and has at least one digit. If the password is valid, print “Password accepted.” If not, use `continue` to prompt the user to enter a valid password.

2. Divisible by 3 or 5: Write a Python program to print all numbers from 1 to 50 that are divisible by either 3 or 5. Use a `for` loop and `continue` to skip numbers that are not divisible by either 3 or 5.

3. Positive Number Sum: Write a Python program that takes positive numbers as input until a negative number is entered. Then, calculate and print the sum of all positive numbers entered. Use a `while` loop and `break` to exit the loop when a negative number is encountered.

4. Word Palindrome Checker: Write a Python program that takes a word as input and checks if it is a palindrome (reads the same forwards and backward). Use `continue` to skip checking the word if its length is less than 3 characters.

5. Vowel Counter: Write a Python program that takes a string as input and counts the number of vowels (a, e, i, o, u) in it. Use a `for` loop and `continue` to skip counting non-vowel characters.

6. Unique Characters: Write a Python program that takes a string as input and checks if it contains all unique characters (no character repeats). Use a `for` loop and `break` when a character repeats.
7.Develop a student information system. Students submit their information & the data has been stored. Print the data they are submitting in this information system.

Case 1: Allow students to choose which information they want to submit.
Case 2: If age is chosen, it should be submitted as a float number.
Case 3: Limit all other information to a maximum of 5 characters.

8.There is a grocery shop which takes regular input from customers. After taking items if they want to add or remove items from their bucket list. We have to generate a program in python.

9.You are given an integer n, representing the size of a list. Next, you receive n strings from the user. Your task is to create a new list containing all the unique characters from these strings. Additionally, sort the characters in lexicographical order.

Example:
Input:
3
Zahid Sani Wakif

Output: ['S', 'W', 'Z', 'a', 'd', 'f', 'h', 'i', 'k', 'n']

10. Mr Rakib to purchase four product items while minimizing cost . He wants to identify the minimum cost of the buying product in the market . SO the four items are Rice , Salt , Fish , Orange .

Given the data here :

RIce	Salt	Fish	Orange
45	34	200	100
42	35	202	99
41	36	201	101
40	36	205	102

Input

Input the product name : Rice

Example Output

Rice -> market 4 value = 40

11.A university management is going to make a system to generate a unique student e-mail id of newly admitted students. Suppose you are the programmer is said to be generate to make e-mail by taking a list of student's name. You have to generate e-mail by adding the length of name and also add the ASCII value of first character after the lower case name. If the name exceed 20 character it ignores that name and proceed to the next activity.

Input: The first line contain the single integers N - Numbers of students in the list. The second line contains N Strings of names N1,N2,N3,…….N(i).(String must not exceed 20 character.
Output: Print the email list according to the scenario. (Lower case name_lenth of name_ascii value of first character)

12.Design a Python function that compresses a given string by replacing repeated characters with the number of repetitions followed by the character itself. It takes input from users of how many string users want to input, maximum length of string and show output of compressed string.

Sample Input:

```
Enter How many String:3
Enter Size of string:6
ttyyuu uuiokjj rrss
```

Sample Output:

```
['2t2y2u', '2u1i1o1k1j', '2r2s']
```