**PYTHON ASSIGNMENT-3**

**-YASH BHAKTA**

**1.Create a Python program that stores a paragraph using triple quotes and extracts all sentences that contain a specific word. ex(extract Python containing sentences )**

**s = """Create a Python program that stores a paragraph using triple quotes and extracts all sentences that contain a specific word.Write a function that extracts and prints the first half and second half of a given string separately.Write a function that takes two strings and concatenates them with a space in between. If the second string is empty, return only the first string"""**

**print(s)**

**w=input("Enter the word: ")**

**s1=s.split(".")**

**for s1 in s1:**

**if w in s1:**

**print(s1)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\1.py"**

**Create a Python program that stores a paragraph using triple quotes and extracts all sentences that contain a specific word.Write a function that extracts and prints the first half and second half of a given string separately.Write a function that takes two strings and concatenates them with a space in between. If the second string is empty, return only the first string**

**Enter the word: python**

**2.Write a function that extracts and prints the first half and second half of a given string separately.**

**s = str(input("Enter String: "))**

**s2 = len(s)**

**print("The length of string: ",s2)**

**length= int(s2/2)**

**print("First Half..")**

**print(s[0:length])**

**print("Second Half..")**

**print(s[length:])**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\2.py"**

**Enter String: YASH BHAKTA**

**The length of string: 11**

**First Half..**

**YASH**

**Second Half..**

**BHAKTA**

**3.Write a function that takes two strings and concatenates them with a space in between. If the second string is empty, return only the first string.**

**def concat(s,s1,s2):**

**if s1=="":**

**return s**

**else:**

**s2=s+" "+s1**

**print(s2)**

**s = str(input("Enter the string :"))**

**s1 = str(input("Enter the string :"))**

**s2=str()**

**print(s)**

**print(s1)**

**concat(s,s1,s2)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\3.py"**

**Enter the string :YASH**

**Enter the string :BHAKTA**

**YASH**

**BHAKTA**

**YASH BHAKTA**

**4.Create a function that: ● Centers a string within 30 spaces (center()). ● Replaces vowels in a string with '\*' (replace()).**

**def centerr(s):**

**return print(s.center(30))**

**def vowel(s,s1):**

**vowels="aeiouAEIOU"**

**for i in vowels:**

**s1=s.replace(i,'\*')**

**return print(s1)**

**s = str(input("Enter a string: "))**

**s1=str()**

**centerr(s)**

**vowel(s,s1)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\4.py"**

**Enter a string: Yash Bhakta**

**Yash Bhakta**

**Y\*sh Bh\*kt\***

**5.Write a program that takes an integer input and uses assignment operators (+=, -=, \*=, /=, //=, %=) to modify it and print the result after each operation sequentially.**

**n=int(input("Entera number: "))**

**i =n**

**m=n**

**b=n**

**v=n**

**c=n**

**x=n**

**n+=10**

**print(i,"After n+=10: ",n)**

**m-=10**

**print(i,"After n-=10: ",m)**

**b\*=10**

**print(i,"After n\*=10: ",b)**

**v/=10**

**print(i,"After n/=10: ",v)**

**c%=10**

**print(i,"After n%=10: ",c)**

**x//=10**

**print(i,"After n//=10: ",x)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\5.py"**

**Entera number: 50**

**50 After n+=10: 60**

**50 After n-=10: 40**

**50 After n\*=10: 500**

**50 After n/=10: 5.0**

**50 After n%=10: 0**

**50 After n//=10: 5**

**6.Write a program that validates a password using the following rules: ● It must be at least 8 characters long. ● It must contain at least one uppercase letter, one lowercase letter, and one number. ● It should not contain spaces. Use string methods and logical operators.**

**def pwvld(p):**

**if len(p) < 8:**

**return False**

**if not any(char.isupper() for char in p):**

**return False**

**if not any(char.islower() for char in p):**

**return False**

**if not any(char.isdigit() for char in p):**

**return False**

**if ' ' in p:**

**return False**

**return True**

**p = input("Enter your password: ")**

**if pwvld(p):**

**print("Password is valid.")**

**else:**

**print("Password is invalid.")**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\6.py"**

**Enter your password: Yashbhakta2005**

**Password is valid.**

**7.Write a program that takes a sentence as input and generates its acronym. Example: "Machine Learning" → "ML"**

**s = str(input("Enter a string: "))**

**w=s.split()**

**a=''.join(w[0].upper() for w in w)**

**print(a)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\7.py"**

**Enter a string: Yash Bhakta**

**YB**

**8.Create a calculator that takes two numbers and an operator (+, -, \*, /, //, %, \*\*) as input and returns the result. (Terminate the program only after the user inputs “0”)**

**def cal():**

**n=int(input("Enter number: "))**

**n1=int(input("Enter another number: "))**

**print("+ for add")**

**print("- for sub")**

**print("\* for mul")**

**print("/ for div")**

**print("// for mol")**

**s=input("What you want to do: ")**

**match s:**

**case '+':**

**print(n+n1)**

**case '-':**

**print(n-n1)**

**case '\*':**

**print(n\*n1)**

**case '/':**

**print(n/n1)**

**case '//':**

**print(n%n1)**

**while True:**

**y= str(input("Write 0 to exit and Enter to Continue: "))**

**if y=='0':**

**break**

**else:**

**cal()**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\8.py"**

**Write 0 to exit and Enter to Continue: s**

**Enter number: 50**

**Enter another number: 50**

**+ for add**

**- for sub**

**\* for mul**

**/ for div**

**// for mol**

**What you want to do: \***

**2500**

**9.Write a function that replaces every occurrence of a banned word in a sentence with \*\*\*\*\*. Example: "Python is fun, but Java is difficult" (banned word: "Java") → "Python is fun, but \*\*\*\*\* is difficult"**

**def word():**

**s = "Python is esay, but java is difficult."**

**print(s)**

**b = "java"**

**s1=s.replace(b,"\*\*\*\*")**

**print(s1)**

**word()**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\9.py"**

**Python is esay, but java is difficult.**

**Python is esay, but \*\*\*\* is difficult.**

**10.Write a function that checks whether two input strings are anagrams (contain the same letters in a different order). Example: Input: "listen", "silent" → Output: "Anagram" Input: "hello", "world" → Output: "Not an anagram"**

**def anagramm():**

**s= str(input("Enter a string: "))**

**s1= str(input("Enter a string: "))**

**s=s.replace(" ","").lower()**

**s1=s.replace(" ","").lower()**

**return sorted(s)==sorted(s1)**

**print(anagramm())**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\10.py"**

**Enter a string: listen**

**Enter a string: silten**

**True**

**11.Write a function that finds the longest word in a given sentence. Example: Input: "I love programming in Python" → Output: "programming"**

**def long(s):**

**w=s.split(" ")**

**l=str(max(w,key=len))**

**print(l)**

**s=str(input("Enter a sentance: "))**

**long(s)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\11.py"**

**Enter a sentance: I love python**

**python**

**12.Write a program that sorts words in a sentence alphabetically. Example: Input: "banana apple cherry" → Output: "apple banana cherry"**

**def alpha(s):**

**w=s.split(" ")**

**s1=sorted(w,key=str.lower)**

**s2=" ".join(s1)**

**print(s2)**

**s=str(input("Enter a sentance: "))**

**alpha(s)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\12.py"**

**Enter a sentance: banana apple chery**

**apple banana chery**

**13.Write a function that counts the number of words in a given sentence. Example: Input: "I love Python programming" → Output: "4 words"**

**def length(s):**

**w=s.split(" ")**

**leng=int(len(w))**

**print("Total words is this sentance:",leng)**

**s=str(input("Enter a sentance: "))**

**length(s)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\13.py"**

**Enter a sentance: The word is lagend**

**Total words is this sentance: 4**

**14.Write a function that counts the occurrences of a specific character in a string. Example: Input: "hello", 'l' → Output: 2**

**def ocurence(s,c):**

**s1=s.count(c)**

**print("The total ocuurencs of",c,"is:",s1)**

**s=str(input("Enter string: "))**

**c=str(input("Enter a char: "))**

**ocurence(s,c)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\14.py"**

**Enter string: Strring**

**Enter a char: r**

**The total ocuurencs of r is: 2**

**15.Write a program that swaps the case of each letter in a string (uppercase becomes lowercase and vice versa). Example: Input: "Hello World" → Output: "hELLO wORLD"**

**def swap(s):**

**s1=s.swapcase()**

**print(s1)**

**s=str(input("Enter a string: "))**

**swap(s)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\15.py"**

**Enter a string: Yash Bhakta**

**yASH bHAKTA**

**16.Write a program that masks all but the last four digits of a credit card number. Example: Input: "1234567812345678" → Output: "\*\*\*\*\*\*\*\*\*\*\*\*5678"**

**def card(s):**

**s1=str(s)**

**m="\*"\*(len(s1)-4)+(s1[-4:])**

**print(m)**

**s=int(input("Enter card number: "))**

**card(s)**

**PS C:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3> python -u "c:\Users\HP\OneDrive\Desktop\SEM-2\PY-Ass\_clg\ASS-3\16.py"**

**Enter card number: 12365478902**

**\*\*\*\*\*\*\*8902**