Kalyani Government Engineering College

Department of Computer Application

Python Programming Lab – MCAN191
Year: 2023-2024
Semester: 1st Semester
Assignment 5
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5.1 Write a program that asks the user to input his name and print its initials. Assuming that the user always types first name, middle name and last name and does not include any unnecessary spaces. For example, if the user enters Ajay Kumar Garg the program should display A. K.G. Note: Don't use split() method.

Code:

```
x = input("Enter the name\n")
m=""
m+=x[0]
m+='.'
for i in range(len(x)):
    if x[i] ==' ':
        m+=x[i+1]
        m+='.'
print(m.upper())
```

Output:

```
Enter the name
Ranjit Kumar Shaw
R.K.S.
```

5.2 A palindrome is a string that reads the same backward as forward. For example, the words dad, madam and radar are all palindromes. Write a programs that determines whether the string is a palindrome. Note: do not use reverse() method

Code:

```
x = input("Enter the string\n")
n=len(x)
flag = 0
for i in range(len(x)//2):
    if x[i] != x[n-i-1]:
        print("string is not palindrome")
        flag=0
        break
    else:
        flag =1

if flag :
    print("string is palindrome")
```

Output:

```
Enter the string
malayalam
string is palindrome
```

5.3 Write a program that display following output:
SHIFT
HIFTS
IFTSH
FTSHI
TSHIF
SHIFT

Code:

```
x = input("Enter the string\n")

t=""
for i in range(len(x)):
    c=x[i+1:]
    t=c+x[:i+1]
    print(t)
```

Output:

```
Enter the string
SHIFT
HIFTS
IFTSH
FTSHI
TSHIF
SHIFT
```

5.4 Write a program in python that accepts a string to setup a passwords. Your entered password must meet the following requirements:
The password must be at least eight characters long.
It must contain at least one uppercase letter.
It must contain at least one lowercase letter.
It must contain at least one numeric digit.
Your program should perform this validation.

Code:

```
def is_valid_password(password):

    if len(password) < 8:
        return False

    if not any(char.isupper() for char in password):
        return False

    if not any(char.islower() for char in password):
        return False

    if not any(char.isdigit() for char in password):
        return False

    return True

user_password = input("Enter your password: \n")

if is_valid_password(user_password):
    print("Password is valid.")
else:
    print("Password does not meet the requirements.")
```

Output:

```
Enter your password:
Madhusudan@123
Password is valid.
```