[1.a]

```
strin = input("Enter a string input: ")
print("First and last 2 characters: ", end="")
print(strin[:2] + strin[-2:])
```

```
Enter a string input: Hello world
First and last 2 characters: Held
```

[1.b]

```
print("Repetition operator if size>=2: ", end='')
if len(strin)<2:
    print("''")
else:
    print(strin*2)
```

```
Repetition operator if size>=2: Hello worldHello world
```

[2.a]

```
strin = input("Enter a string input: ")
i0 = strin[0]
print(i0+strin.replace(i0, "$")[1:])
```

```
Enter a string input: Rahul Ram Rathish
Rahul $am $athish
```

[2.b]

```
strin = input("Enter a string to remove the nth index char: ")
ind = int(input("Enter the index of the character: "))
print(strin[:ind]+strin[ind+1:])
```

```
Enter a string to remove the nth index char: Hello World
Enter the index of the character: 2
Helo World
```

[2.c]

```
strin = input("Enter a string to exchange first and last character: ")
print(strin[-1]+strin[1:-1]+strin[0])
```

```
Enter a string to exchange first and last character: Hello World
dello WorlH
```

[2.d]

```
strin = input("Enter a sentence to count the words: ")
words = [i for i in strin.split()]
word_count = {i:words.count(i) for i in set(words)}
for i in sorted(word_count, key=lambda k: word_count[k], reverse=True):
    print("{:<10} : {:>4}".format(i, word_count[i]))
```

```
Enter a sentence to count the words: Hello you me Hello to me you there Hello
Hello      :    3
you        :    2
me         :    2
to         :    1
there      :    1
```

[2.e]

```
strin = input("Enter a sentence to convert into upper and lower cases: ")
print(f"Upper Case : {strin.upper()}")
print(f"Lower Case : {strin.lower()}")
```

```
Enter a sentence to convert into upper and lower cases: HelLo WoRlD
Upper Case : HELLO WORLD
Lower Case : hello world
```

[3]

```
strin = input("Enter a comma seperated sequence of words: ")
print(','.join(sorted(list(set(strin.split(','))))))
```

```
Enter a comma seperated sequence of words: red,white,black,red,green,black
black,green,red,white
```

[4]

```
def Eliminate_Letter(word,letter):
    return word.replace(letter, '')

print(Eliminate_Letter("malayalam", 'a'))
```

```
mlylm
```

[5.a]

```
def Replace_vowels(word):
    return word.replace('a', '').replace('e', '').replace('i', '').replace('o', '').replace('u', '')


print(Replace_vowels("education"))
```

```
dctn
```

[5.b]

```
def modify_case(word):
    return ''.join([i.lower() if i.isupper() else i.upper() for i in list(word)])


print("HeLlo TheRe")
print(modify_case("HeLlo TheRe"))
```

```
HeLlo TheRe
hElLO tHErE
```

[5.c]

```
def get_char(word,position):
    if position<len(word) and position>=-len(word):
        return word[position]
    else:
        return f"Invald Indexing: {position}"


print(get_char('Malayalam', 2))
```

```
l
```

[6]

```
def ispal(x):
    if isinstance(x, str) == False:
        raise ValueError ("ValueError: invalid Literal for the type 'str'")
    rev = x[::-1]
    if x == rev:
        return True
    return False


print(ispal("malayalam"))
print(ispal("education"))
```

```
True
False
```

[7]

```
strin = input("Enter your Full Name: ")
```

```
Enter your Full Name: Ajay kumar garg
```

```
print(strin[0].upper()+". ", end='')
for i, val in enumerate(strin):
    if val == " ":
        print(strin[i+1].upper()+". ", end="")
```

```
A. K. G.
```

Ajay Kumar Garg = A. K. G.

[8]

```
def shuffleWord(word):
    for i in range(len(word)+1):
        print(word[i:] + word[:i])


shuffleWord("SHIFT")
```

```
SHIFT
HIFTS
IFTSH
FTSHI
TSHIF
SHIFT
```

[9]

```
strin = input("Enter a password to check validity: ")
def passwordCheck(paswrd):
    pass_stat = stat(paswrd)
    if len(paswrd)<8:
        print("Invalid Password: The password must be at least eight characters long.")
        return
    if pass_stat[4]==0:
        print('Invalid Password: It must contain at least one uppercase letter.')
        return
    if pass_stat[5]==0:
        print('Invalid Password: It must contain at least one lowercase letter.')
        return
    if pass_stat[0]==0:
        print("Invalid Password: It must contain at least one numeric digit.")
        return
    print(f"Valid Password: The given Password {paswrd} satisfies all condition")
```

```
Enter a password to check validity: reee5
```

```
def stat(x):
    dg = 0
    void = 0
    vow = 0
    alpha = 0
    up = 0
    low = 0
    for i in x:
        if i.isdigit():
            dg += 1
        if i.isspace():
            void += 1
        if i in ['a', 'e', 'i', 'o', 'u']:
            vow += 1
        if i.isalpha():
            alpha += 1
        if i.isupper():
```

```
            if i.isupper():
                up+=1
            if i.islower():
                low+=1
        return dg, void, vow, alpha, up, low


    passwordCheck(strin)
    passwordCheck("HelloKitty95")
```

```
        Invalid Password: The password must be at least eight characters long.
        Valid Password: The given Password HelloKitty95 satisfies all condition
```