for loop

"for" is a keyword used to represent for loop
for loop is used to read/iterate values from iterables or collections.
Python's for statement iterates over the items of any sequence (a list or a string), in the order that they appear in the sequence or collection.

Syntax

for variable in iterable/collection:
        statement-1
        statement-2
statement-3

for loop each time read one value from collection and assign to variable. After assigning to variable, it execute statement-1,statement-2. For loop repeat execution of statement-1,statement-2 until all values read from collection.

Example:
str1="python"
for ch in str1:
    print(ch)

Output:
p
y
t
h
o
n

Example:
write a program to find length of string

```python
str1=input("enter any string") # nit
c=0
for ch in str1:
    c=c+1

print("Length of string is ",c)
```

Output:
enter any stringnaresh it
Length of string is 9

Example:
write a program to count vowels in a given string

```python
str1=input("enter any string") # java
c=0
for ch in str1:
    if ch in "aeiouAEIOU":
        c=c+1

print("Count of vowels ",c)
```

Output

enter any stringjava
Count of vowels 2

Example:
write a program to count alphabets,digits and special characters

```python
str1=input("enter any string")# ab1$
ac=0
dc=0
sc=0
for ch in str1:
    if ch>='A' and ch<='Z' or ch>='a' and ch<='z':
        ac+=1
    elif ch>='0' and ch<='9':
        dc+=1
```

```
    else:
        sc+=1

print("Alphabet count ",ac)
print("Digit count ",dc)
print("Special character count ",sc)
```

Output:
enter any string12$ab*c
Alphabet count 3
Digit count 2
Special character count 2

Example:
```
# write a program to convert input string from
# uppercase to lowercase

str1=input("enter any string") # A
str2=""
for ch in str1:
    if ch>='A' and ch<='Z':
        str2=str2+chr(ord(ch)+32)
    else:
        str2=str2+ch

print(str1)
print(str2)
```

Output:
enter any stringAB
AB
ab

========== RESTART: F:/python6pmaug/test67.py ========
enter any stringAbBD
AbBD
abbd

========== RESTART: F:/python6pmaug/test67.py ========
enter any string123

123
123