New Style String formatting using format method of str class

In this approach string contains formatting fields. Formatting fields are represented using {}. These fields are replaced with values.

Syntax: “{},{},{}”.format(value,value,value,..)

Example:

```
base=float(input("enter base"))
height=float(input("enter height"))
area=0.5*base*height
print("area of trianle is {:.2f}".format(area))
```

Output:

```
enter base1.2
enter height1.3
area of trianle is 0.78
```

Example:

```
a=10
b=20
print("sum of {} and {} is {}".format(a,b,a+b))
sum of 10 and 20 is 30
>>> print("sum of {x} and {y} is {z}".format(x=a,y=b,z=a+b))
sum of 10 and 20 is 30
>>> a=65
>>> print("{:d},{:o},{:x},{:b}".format(a,a,a,a))
65,101,41,1000001
>>> rno=101
>>> name="naresh"
>>> print("Rollno {}\nName {}".format(rno,name))
Rollno 101
Name naresh
```

f-string

This string is introduced is in python 3.8 version

The string which is prefix with “f” or “F” is called format string

```
>>> a=10
>>> b=20
>>> print(f'sum of {a} and {b} is {a+b}')
```

```
sum of 10 and 20 is 30
>>> c=65
>>> print(f'{c:d},{c:o},{c:x},{c:b}')
...
65,101,41,1000001
```

str.isalnum()
Return True if all characters in the string are alphanumeric and there is at least one character, False otherwise.

```
>>> str1="naresh"
>>> str1.isalnum()
True
>>> str2="123"
>>> str2.isalnum()
True
>>> str3="nit123"
>>> str3.isalnum()
True
>>> str4="nit$"
>>> str4.isalnum()
False
```

str.isalpha()
Return True if all characters in the string are alphabetic and there is at least one character, False otherwise

```
name=input("enter any name")
if name.isalpha():
    print(f'{name} is valid')
else:
    print(f'{name} is invalid')
```

str.isdecimal()
Return True if all characters in the string are decimal characters and there is at least one character, False otherwise

Example:

```
n1=input("enter first number")
```

```
n2=input("enter second number")
if n1.isdecimal() and n2.isdecimal():
    num1=int(n1)
    num2=int(n2)
    print(f'sum of {num1} and {num2} is {num1+num2}')
else:
    print("invalid input")
```

Output:

```
========= RESTART: F:/python6pmaug/test140.py ========
enter first number10
enter second number20
sum of 10 and 20 is 30
>>>
========= RESTART: F:/python6pmaug/test140.py ========
enter first numberab
enter second number45
invalid input
```

Example:

```
>>> s1="45"
...
>>> s1.isdecimal()
...
True
>>> s2="ab"
...
>>> s2.isdecimal()
...
False
```

str.isdigit()

Return True if all characters in the string are digits and there is at least one character, False otherwise

```
>>> s1="0123"
...
>>> s1.isdecimal()
...
True
```

```
>>> s2="123"
...
>>> s2.isdigit()
...
True
```

Example:

```
>>> "name".isidentifier()
True
>>> import keyword
>>> keyword.iskeyword("def")
True
>>> keyword.iskeyword("name")
False
```

str.islower()
Return True if all cased characters in the string are lowercase and there is at least one cased character, False otherwise

Example:

```
>>> s1="naresh"
>>> s1.islower()
True
>>> s2="NARESH"
>>> s2.islower()
False
```

Example:

```
name=input("Enter name in Capital letters")
if name.islower():
   print(f'{name} must be in capital letters')
else:
   print(f'{name} valid')
```

Output:

```
========= RESTART: F:/python6pmaug/test141.py ========
Enter name in Capital lettersnaresh
naresh must be in capital letters
>>>
```

```
========= RESTART: F:/python6pmaug/test141.py ========
Enter name in Capital lettersNARESH
NARESH valid
```

str.isspace()

Return True if there are only whitespace characters in the string and there is at least one character, False otherwise.

```
>>> str1="python language"
>>> str1.isspace()
False
>>> str2="    "
>>> str2.isspace()
True
>>> str3=""
>>> str3.isspace()
False
```

str.istitle()

Return True if the string is a titlecased string and there is at least one character, for example uppercase characters may only follow uncased characters and lowercase characters only cased ones. Return False otherwise.

str.isupper()

Return True if all cased characters in the string are uppercase and there is at least one cased character, False otherwise