Write a simple Python class named student and display its type. Also, display the *dict* attribute keys and the value of the *module* attribute of the student class.

In [21]:
```
class student:
    def __init__(self,name,eid,cls):
        self.name=name
        self.eid=eid
        self.cls=cls

    def greet(self):
        print("welcome to new academic year!!!",self.name)

std1=student("divya",12,"Btech")

print("id:",std1.eid)
print("name:",std1.name)
print("cls:",std1.cls)
std1.greet()
print(student.__dict__)
```

```
id: 12
name: divya
cls: Btech
welcome to new academic year!!! divya
{'__module__': '__main__', '__init__': <function student.__init__ at 0x0000025FA71E2040>, 'greet': <function student.greet at 0x0000025FA71E20D0>, '__dict__': <attribute '__dict__' of 'student' objects>, '__weakref__': <attribute
'__weakref__' of 'student' objects>, '__doc__': None}
```

Write a Python class to convert an integer to a roman numeral.

In [14]:
```
class integertoroman:
    def int_to_Roman(self, num):
        val = [
            1000, 900, 500, 400,
            100, 90, 50, 40,
            10, 9, 5, 4,
            1
            ]
        rom= [
            "M", "CM", "D", "CD",
            "C", "XC", "L", "XL",
            "X", "IX", "V", "IV",
            "I"
            ]
        roman_num = ''
        i = 0
        while  num > 0:
            for _ in range(num // val[i]):
                roman_num += rom[i]
                num -= val[i]
            i += 1
        return roman_num

print(integertoroman().int_to_Roman(1))
print(integertoroman().int_to_Roman(4000))
```

```
I
MMMM
```

Write a Python class to convert a roman numeral to an integer.

In [16]:
```
class romantointeger:
    def roman_to_int(self, s):
        rom_val = {'I': 1, 'V': 5, 'X': 10, 'L': 50, 'C': 100, 'D': 500, 'M': 1000}
        int_val = 0
        for i in range(len(s)):
            if i > 0 and rom_val[s[i]] > rom_val[s[i - 1]]:
                int_val += rom_val[s[i]] - 2 * rom_val[s[i - 1]]
            else:
                int_val += rom_val[s[i]]
        return int_val

print(romantointeger().roman_to_int('MMMCMLXXXVI'))
print(romantointeger().roman_to_int('MMMM'))
print(romantointeger().roman_to_int('C'))
```

```
3986
4000
100
```

Write a Python class to implement pow(x,n).

In [5]:
```
class power:
    def __init__(self,x,n):
        self.x=x
        self.n=n
        power_=x**n
        print("the power is:",power_)
power1=power(int(input("enter the base")), int(input("enter the exponent")))
```

```
enter the base6
enter the exponent7
the power is: 279936
```

Write a Python class to reverse a string word by word.

In [8]:
```
class reverse:
    def __init__(self,string):
        self.string=string
        reverse_=string[len(string)::-1]
        print("the reverse is:",reverse_)
reverse1=reverse(input("enter the string"))
```

```
enter the stringEntertainment
the reverse is: tnemniatretnE
```

In [ ]:
```

```