"Special Methods" for Python Classes

Each of these is called automatically when certain situations occur.

_ _ init _ _(self, <optional additional args)

This is called when an object of the class is constructed. If the class name is C we make a new object of the class with

C(<value for each optional arg>)

_ _ str _ _ (self)

This should return a string. It is called automatically whenever the system wants a string representation for an object of the class.

If x is an object of the class, this is returned by

      str(x)

And it is what is printed by

      print(x)

_ _ add _ _(self, x)

_ _ sub _ _ (self, x)

_ _ mul _ _(self, x)

_ _ div _ _(self, x)

These allow the arithmetic operators + - * / to be used with objects of a class. Each should return a new object. In the expression a op b self is a and x is b.

_ _ lt _ _ (self, x)

_ _ le _ _(self, x)

_ _ gt _ _(self, x)

_ _ ge _ _(self, x)

_ _ eq _ _(self, x)

_ _ ne _ _(self, x)

These allow you to use the comparison operators < <= > >= == and != with objects of the class. Each should return True or False. To sort a list of objects you should have _ _ lt _ _(self, x) defined for the class.