

## Lesson1

```
'''
```

```
Created on Jan 28, 2016
```

```
@author: bob
```

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'''
```

```
l1= ["eggs", "apples", "butter", "apples"]
```

```
print("create a list \n",l1)
```

```
s0=set(l1);
```

```
print("the list as a set \n",s0)
```

```
s1 = set(range(0,30,2))
```

```
print("first set is \n",s1)
```

```
s2= set(range(0,30,3))
```

```
print("second set is \n",s2)
```

```
print("should use Venn Diagrams to figure out \n")
```

```
print("the union is \n",s1|s2)
```

```
print("the intersection is \n",s1&s2)
```

```
print("the first minus the second is \n", s1-s2)
```

```
print("the symmetric difference is \n",s1^s2)
```

```
print("is s1 a proper subset of s2 \n", s1<s2)
```

```
print("is s1 intersect s2 a subset of s2 \n",s1&s2<s2)
```

```
print("is s1 a proper subset of s1 \n",s1<s1)
```

```
print("is s1 a subset of s1 \n",s1<=s1)
```

```
print("is 3 a member of s1 \n", 3 in s1)
```

```
l1= l1+[["raisins"]]
```

```
print("the new list \n",l1)
```

```
print ("old set \n",s0)
```

```
#s0= set(l1) # note error
```

```
#print("new set \n",s0) # note error
```

```
s3= frozenset(["raisins,figs"])
```

```
print("the frozen set is \n",s3)
```

```
s4 = s1|s3
```

```
print("evens plus new set have set of sets \n",s4)
```

```
#s3.add("dates")# not allowed
```

```
#s3.discard("raisins")#not allowed
```

```
emptySet = set()# note writing it as {} doesn't work
```

```
print("the empty set is \n",emptySet)
```

```
print("empty set is in anything \n", emptySet <= s1)
```

```
print("empty set is subset of itself \n",emptySet<= emptySet)
```

## Lesson1

```
s5=set("godfather")
s6= set("fathergod")
print("first godfather \n",s5," \n second godfather \n",s6)
print("is first equal second \n",s5==s6)
print("is first unequal to second \n",s5!=s6)
```