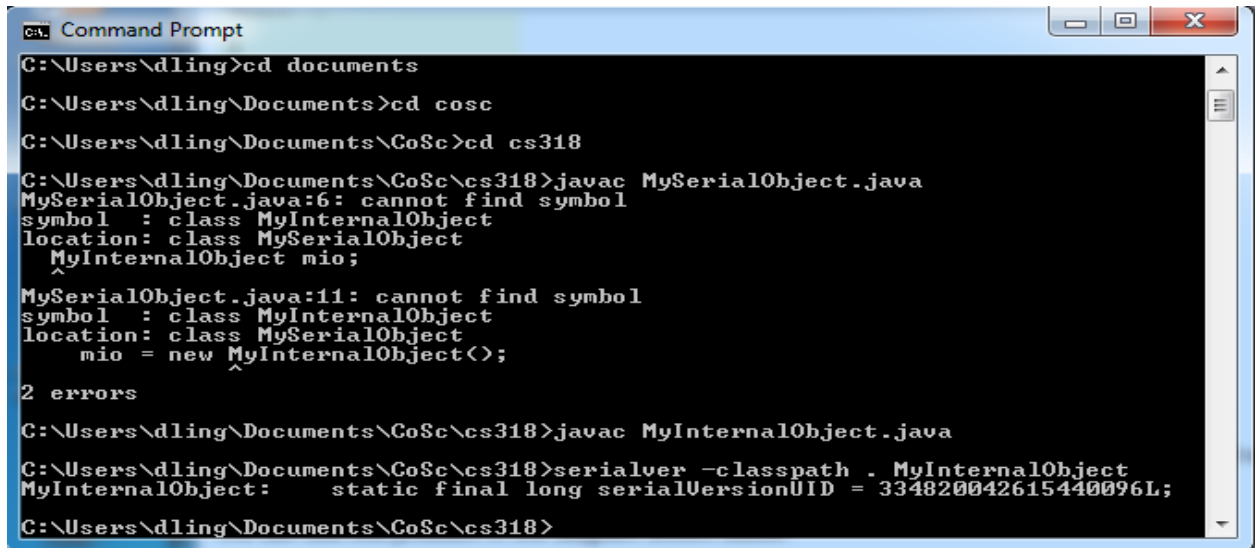


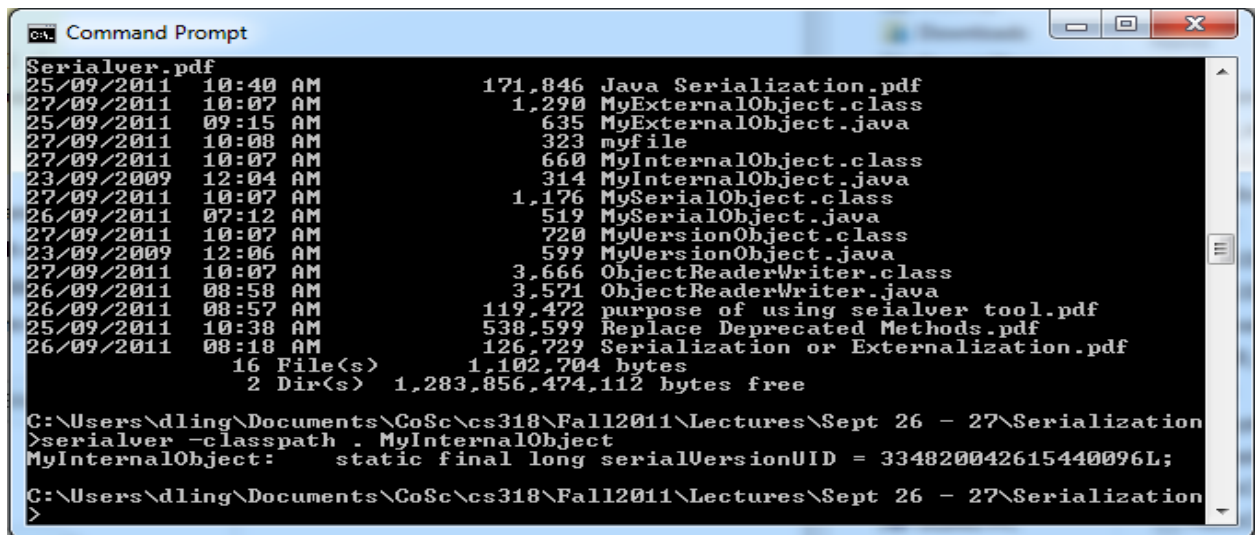
What is special about SUID?

Here are the things that I found by experimenting a bit of a serialized class named `MyInternalObject.java` as follows:

1. Make a copy of the java file from my serialization folder to cs318 folder. Then compile the java program in their respective folder separately, and then check their SUID with the serialver utility at the command prompt (see below).



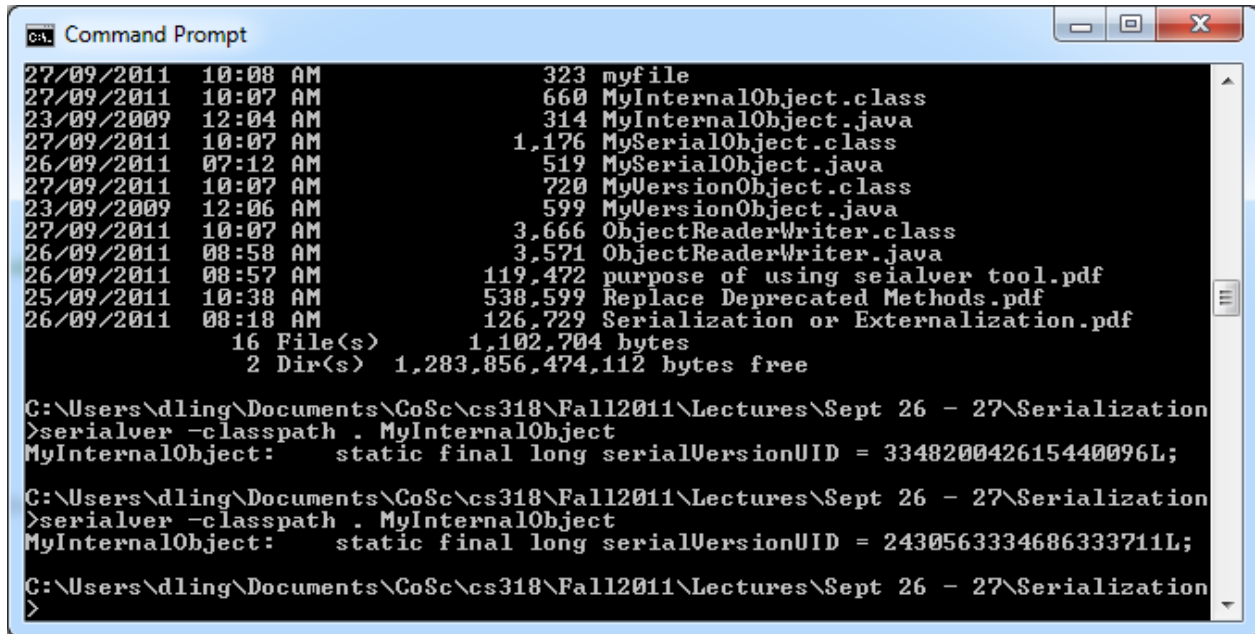
```
C:\Users\dling>cd documents
C:\Users\dling\Documents>cd cosc
C:\Users\dling\Documents\CoSc>cd cs318
C:\Users\dling\Documents\CoSc\cs318>javac MySerialObject.java
MySerialObject.java:6: cannot find symbol
symbol   : class MyInternalObject
location: class MySerialObject
    MyInternalObject mio;
    ^
MySerialObject.java:11: cannot find symbol
symbol   : class MyInternalObject
location: class MySerialObject
    mio = new MyInternalObject();
             ^
2 errors
C:\Users\dling\Documents\CoSc\cs318>javac MyInternalObject.java
C:\Users\dling\Documents\CoSc\cs318>serialver -classpath . MyInternalObject
MyInternalObject:    static final long serialVersionUID = 334820042615440096L;
C:\Users\dling\Documents\CoSc\cs318>
```



```
Serialver.pdf
25/09/2011 10:40 AM 171,846 Java Serialization.pdf
27/09/2011 10:07 AM 1,290 MyExternalObject.class
25/09/2011 09:15 AM 635 MyExternalObject.java
27/09/2011 10:08 AM 323 myfile
27/09/2011 10:07 AM 660 MyInternalObject.class
23/09/2009 12:04 AM 314 MyInternalObject.java
27/09/2011 10:07 AM 1,176 MySerialObject.class
26/09/2011 07:12 AM 519 MySerialObject.java
27/09/2011 10:07 AM 720 MyVersionObject.class
23/09/2009 12:06 AM 599 MyVersionObject.java
27/09/2011 10:07 AM 3,666 ObjectReaderWriter.class
26/09/2011 08:58 AM 3,571 ObjectReaderWriter.java
26/09/2011 08:57 AM 119,472 purpose of using serialver tool.pdf
25/09/2011 10:38 AM 538,599 Replace Deprecated Methods.pdf
26/09/2011 08:18 AM 126,729 Serialization or Externalization.pdf
16 File(s) 1,102,704 bytes
2 Dir(s) 1,283,856,474,112 bytes free
C:\Users\dling\Documents\CoSc\cs318\Fall2011\Lectures\Sept 26 - 27\Serialization
>serialver -classpath . MyInternalObject
MyInternalObject:    static final long serialVersionUID = 334820042615440096L;
C:\Users\dling\Documents\CoSc\cs318\Fall2011\Lectures\Sept 26 - 27\Serialization
>
```

Their SUIDs are identical. So the same class file to be used in different places still has the same SUID.

- Next I modified the java file in the Serialization folder by changing a variable name from **i** to **num**, and changing the method name **getI** to **getNum**, etc. Then I compiled the file within JCreator IDE and used the serialver utility at the command prompt to check MyInternalObject class again(see below):



```
27/09/2011 10:08 AM 323 myfile
27/09/2011 10:07 AM 660 MyInternalObject.class
23/09/2009 12:04 AM 314 MyInternalObject.java
27/09/2011 10:07 AM 1,176 MySerialObject.class
26/09/2011 07:12 AM 519 MySerialObject.java
27/09/2011 10:07 AM 720 MyVersionObject.class
23/09/2009 12:06 AM 599 MyVersionObject.java
27/09/2011 10:07 AM 3,666 ObjectReaderWriter.class
26/09/2011 08:58 AM 3,571 ObjectReaderWriter.java
26/09/2011 08:57 AM 119,472 purpose of using seialver tool.pdf
25/09/2011 10:38 AM 538,599 Replace Deprecated Methods.pdf
26/09/2011 08:18 AM 126,729 Serialization or Externalization.pdf
16 File(s) 1,102,704 bytes
2 Dir(s) 1,283,856,474,112 bytes free

C:\Users\dling\Documents\CoSc\cs318\Fall2011\Lectures\Sept 26 - 27\Serialization
>serialver -classpath . MyInternalObject
MyInternalObject: static final long serialVersionUID = 334820042615440096L;

C:\Users\dling\Documents\CoSc\cs318\Fall2011\Lectures\Sept 26 - 27\Serialization
>serialver -classpath . MyInternalObject
MyInternalObject: static final long serialVersionUID = 2430563334686333711L;

C:\Users\dling\Documents\CoSc\cs318\Fall2011\Lectures\Sept 26 - 27\Serialization
>
```

Their SUIDs are different!

So I believe that a unique SUID is assigned to each serialized class is based on the contents of the class file using one of MD5/SHA1/SHA2 /SHA5 types of Digital Signature algorithms.