



# Version Control

## Command Line

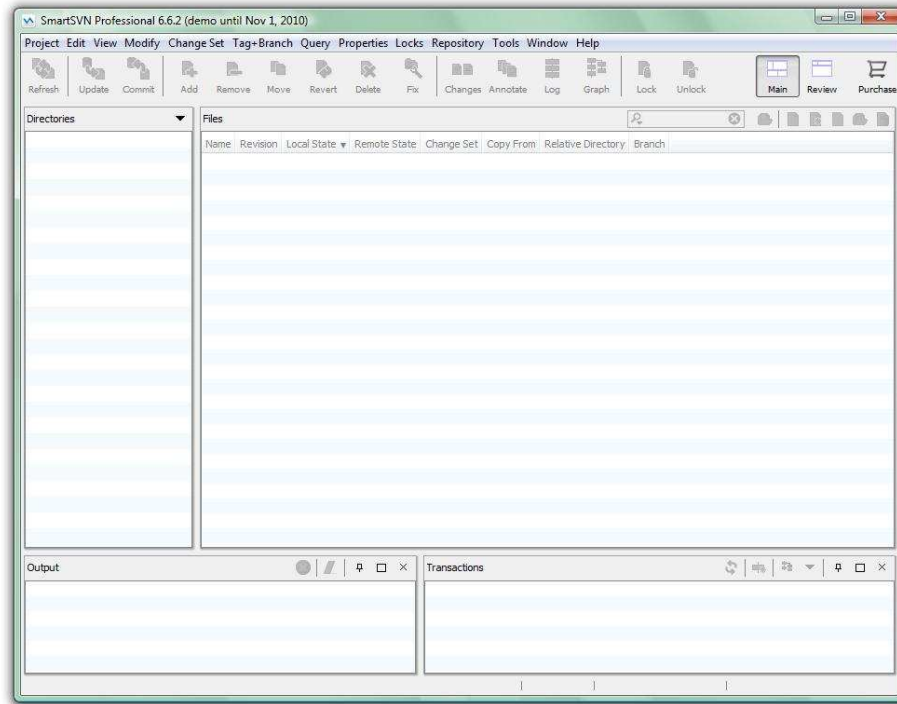


Copyright © Software Carpentry 2010

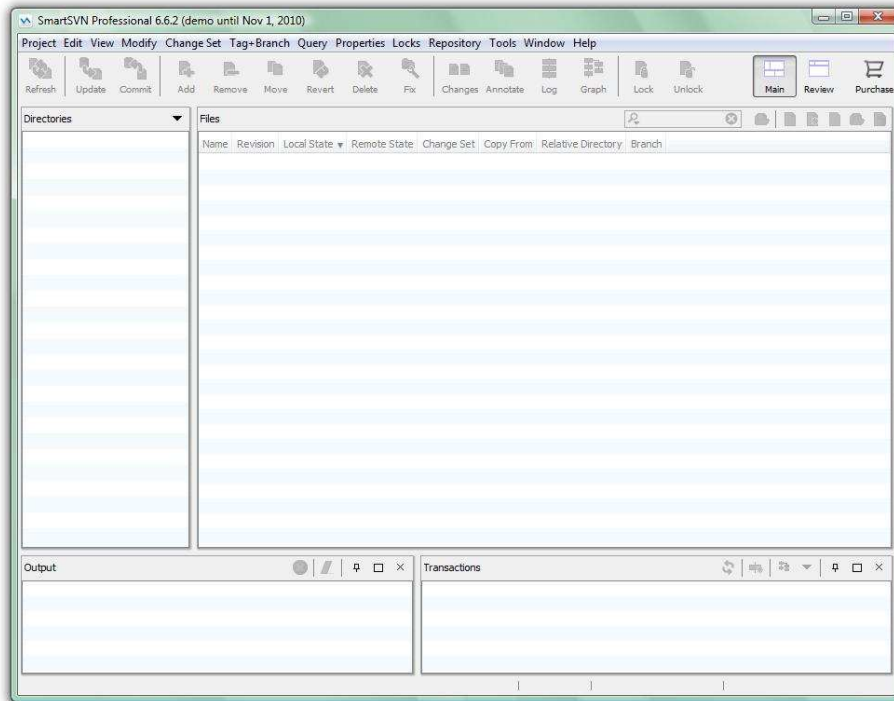
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# SmartSVN

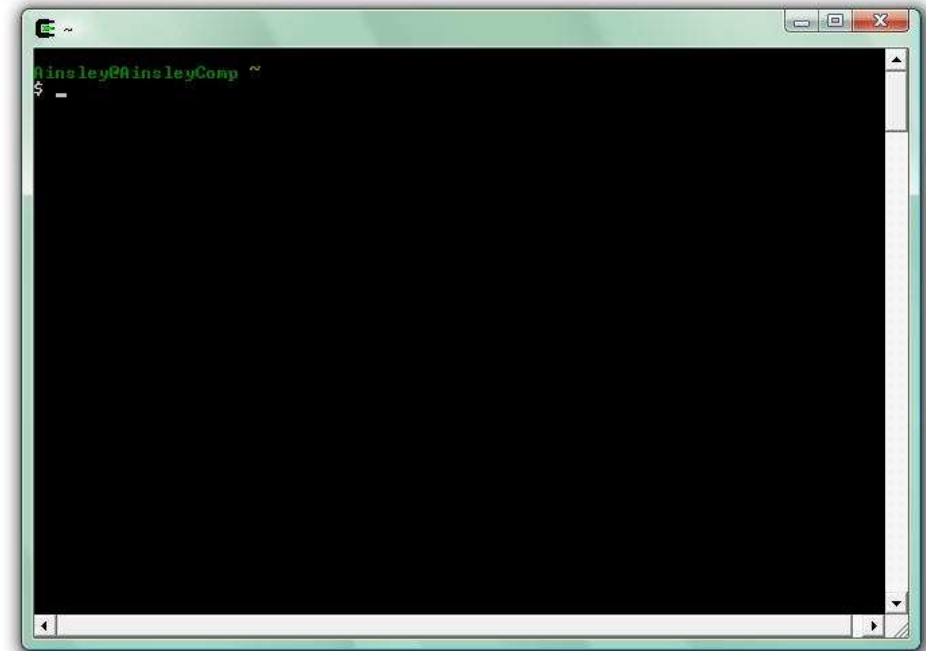


# SmartSVN



Version Control

# Command Line



Command Line

**It's fast.**

**It's fast.**

**It's simple.**



**revision 6**



```
$ svn checkout
```



```
$ svn co
```





```
$ svn co https://universal.software-carpentry.org  
/cygwin/home/dracula/monsters
```



```
$ svn co https://universal.software-carpentry.org  
/cygwin/home/dracula/monsters
```

repository

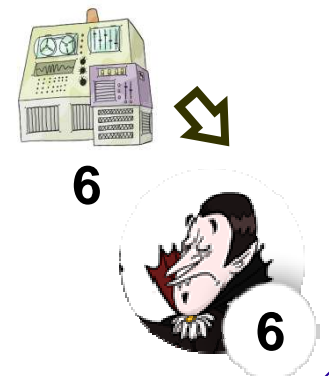


```
$ svn co https://universal.software-carpentry.org  
/cygwin/home/dracula/monsters
```

working copy



```
$ svn co https://universal.software-carpentry.org
  /cygwin/home/dracula/monsters
A  earth/carlsbad.txt
A  earth/antarctica.txt
...
Checked out revision 6.
$
```



```
$ svn co https://universal.software-carpentry.org  
/cygwin/home/dracula/monsters
```

```
A  earth/carlsbad.txt
```

```
A  earth/antarctica.txt
```

```
...
```

```
Checked out revision 6.
```

```
$ cd /cygwin/home/dracula/monsters
```

```
$
```



```
$ svn co https://universal.software-carpentry.org  
/cygwin/home/dracula/monsters
```

```
A  earth/carlsbad.txt
```

```
A  earth/antarctica.txt
```

```
...
```

```
Checked out revision 6.
```

```
$ cd /cygwin/home/dracula/monsters
```

```
$ ls
```

```
earth  mars  jupiter  ...
```

```
$
```



```
$ svn log
```

```
$ svn log
```

*Damn the budget – the Jovian moons would be ...*

-----

*r6 / mummy / 2010-07-26 09:21:39 / 1 lines*

*The budget might not even stretch to a deep...*

-----

*r5 / mummy / 2010-07-26 09:19:18 / 1 lines*

...

\$





```
$ svn log
```

```
Damn the budget – the Jovian moons would be ...
```

```
-----
```

```
r6 / mummy / 2010-07-26 09:21:39 / 1 lines
```

```
The budget might not even stretch to a deep..
```

```
-----
```

```
r5 / mummy / 2010-07-26 09:19:18 / 1 lines
```

```
...
```

```
$
```



```
$ svn log
```

*Damn the budget – the Jovian moons would be ...*

-----  
**r6** / mummy / 2010-07-26 09:21:39 / 1 lines

*The budget might not even stretch to a deep...*

-----  
**r5** / mummy / 2010-07-26 09:19:18 / 1 lines

...

\$



```
$ svn log
```

*Damn the budget – the Jovian moons would be ...*

-----

```
r6 / mummy / 2010-07-26 09:21:39 / 1 lines
```

*The budget might not even stretch to a deep...*

-----

```
r5 / mummy / 2010-07-26 09:19:18 / 1 lines
```

...

```
$
```



```
$ cd jupiter
```

```
$
```



```
$ cd jupiter
```

```
$ nano moons.txt
```

*GNU Nano*

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Calisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>

...

```
$
```



```
$ cd jupiter
```

```
$ nano moons.txt
```

← see SWC lecture on “The Shell” for details about file creation

*GNU Nano*

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Calisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>
...			

```
$
```



```
$ cd jupiter
```

```
$ nano moons.txt
```

*GNU Nano*

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Calisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>

...

```
$
```



```
$ cd jupiter
```

```
$ nano moons.txt
```

*GNU Nano*

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Calisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>

...

```
$ svn add
```





```
$ cd jupiter
```

```
$ nano moons.txt
```

*GNU Nano*

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Calisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>

...

```
$ svn add moons.txt
```



```
$ cd jupiter
```

```
$ nano moons.txt
```

*GNU Nano*

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Calisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>

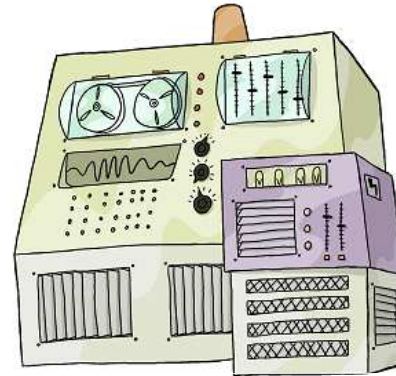
...

```
$ svn add moons.txt
```

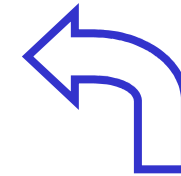
```
A moons.txt
```

```
$
```





**revision 6**



**revision 6+**

```
$ svn commit -m "Some basic facts about the  
Galilean moons of Jupiter."
```



```
$ svn commit -m "Some basic facts about the  
Galilean moons of Jupiter."
```



```
$ svn commit -m "Some basic facts about the  
Galilean moons of Jupiter."
```



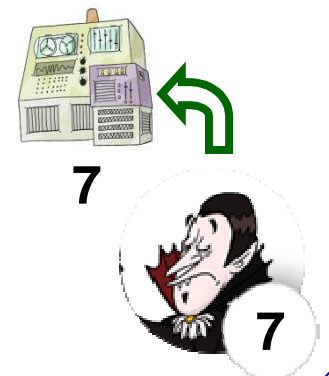
```
$ svn commit -m "Some basic facts about the
    Galilean moons of Jupiter."
```

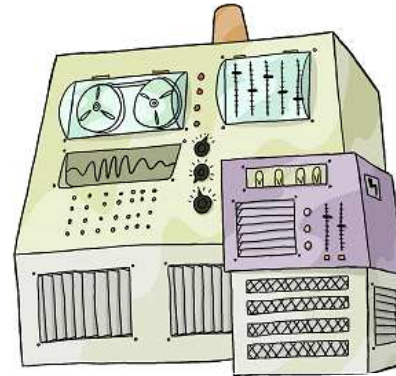
```
Adding      moons.txt
```

```
Transmitting file data . .
```

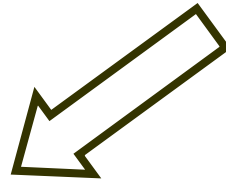
```
Committed revision 7.
```

```
$
```





**revision 7**



**revision 6**



```
$ cd /cygwin/home/wolfman/monsters
```



```
$ cd /cygwin/home/wolfman/monsters  
$ svn update
```



```
$ cd /cygwin/home/wolfman/monsters
```

```
$ svn update
```

```
A  jupiter/moons.txt
```

```
Updated to revision 7.
```

```
$
```



```
$ cd /cygwin/home/wolfman/monsters
```

```
$ svn update
```

```
A  jupiter/moons.txt
```

```
Updated to revision 7.
```

```
$ cd jupiter
```

```
$ less moons.txt
```

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Amalthea</i>	<i>181.4</i>	<i>0.498179</i>	<i>0.075</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Calisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>



```
$ cd /cygwin/home/wolfman/monsters
```

```
$ svn update
```

```
A  jupiter/moons.txt
```

```
Updated to revision 7.
```

```
$ cd jupiter
```

```
$ less moons.txt
```

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Amalthea</i>	<i>181.4</i>	<i>0.498179</i>	<i>0.075</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Calisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>



\$ nano moons.txt

GNU Nano

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Callisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>



\$ nano moons.txt

GNU Nano

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Amalthea</i>	<i>181.4</i>	<i>0.498179</i>	<i>0.075</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Callisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>



```
$ nano moons.txt
```

*GNU Nano*

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
<i>Amalthea</i>	<i>181.4</i>	<i>0.498179</i>	<i>0.075</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Callisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>

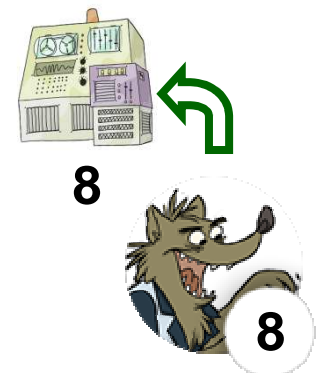
...

```
$ svn commit -m "1. Fixed typo Calisto->Callisto.  
2. Added info about Amalthea."
```

*Sending jupiter/moons.txt*

*Transmitting file data .*

*Committed revision 8.*





```
$ cd /cygwin/home/dracula/monsters
```



```
$ cd /cygwin/home/dracula/monsters  
$ svn diff
```



```
$ cd /cygwin/home/dracula/monsters
```

```
$ svn diff -r HEAD
```



```
$ cd /cygwin/home/dracula/monsters
```

```
$ svn diff -r HEAD
```



```
$ cd /cygwin/home/dracula/monsters
```

```
$ svn diff -r HEAD
```

```
Index: jupiter/moons.txt
```

```
=====
```

```
--- jupiter/moons.txt    (revision 8)
```

```
+++ jupiter/moons.txt    (working copy)
```

```
@@ -1,6 +1,5 @@
```

Name	Orbital Radius	Orbital Period	Mass
-Amalthea	181.4	0.498179	0.075
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
-Callisto	1882.7	16.689018	1075.9
+Calisto	1882.7	16.689018	1075.9

```
$
```



```
$ cd /cygwin/home/dracula/monsters
```

```
$ svn diff -r HEAD
```

```
Index: jupiter/moons.txt
```

```
=====
```

```
--- jupiter/moons.txt    (revision 8)
```

```
+++ jupiter/moons.txt    (working copy)
```

```
@@ -1,6 +1,5 @@
```

Name	Orbital Radius	Orbital Period	Mass
-Amalthea	181.4	0.498179	0.075
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
-Callisto	1882.7	16.689018	1075.9
+Calisto	1882.7	16.689018	1075.9

```
$
```



```
$ cd /cygwin/home/dracula/monsters
```

```
$ svn diff -r HEAD
```

```
Index: jupiter/moons.txt
```

```
=====
```

```
--- jupiter/moons.txt    (revision 8)
```

```
+++ jupiter/moons.txt    (working copy)
```

```
@@ -1,6 +1,5 @@
```

Name	Orbital Radius	Orbital Period	Mass
-Amalthea	181.4	0.498179	0.075
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
-Callisto	1882.7	16.689018	1075.9
+Calisto	1882.7	16.689018	1075.9

```
$
```



```
$ cd /cygwin/home/dracula/monsters
```

```
$ svn diff -r HEAD
```

```
Index: jupiter/moons.txt
```

```
=====
```

```
--- jupiter/moons.txt    (revision 8)
```

```
+++ jupiter/moons.txt    (working copy)
```

```
@@ -1,6 +1,5 @@
```

Name	Orbital Radius	Orbital Period	Mass
-Amalthea	181.4	0.498179	0.075
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
-Callisto	1882.7	16.689018	1075.9
+Calisto	1882.7	16.689018	1075.9



8



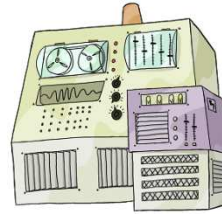
```
$ svn update
```

```
G    jupiter/moons.txt
```

```
Updated to revision 8.
```







**revision 8**



**revision 8**

Version Control



**revision 8**

Command Line

# Dealing with Conflicts



revision 8

moons.txt - Notepad

Name	Orbital Radius	Orbital Period	Mass
Amalthea	181.4	0.498179	0.075
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
Callisto	1882.7	16.689018	1075.9
Himalia	11460	250.5662	0.095
Elara	11740	259.6528	0.008

moons.txt - Notepad

Name	Orbital Radius	Orbital Period	Mass
Amalthea	181.4	0.498179	0.074
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
Callisto	1882.7	16.689018	1075.9



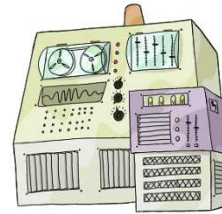
revision 8+

Version Control



revision 8+

Command Line



revision 9



moons.txt - Notepad

Name	Orbital Radius	Orbital Period	Mass
Amalthea	181.4	0.498179	0.075
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
Callisto	1882.7	16.689018	1075.9
Himalia	11460	250.5662	0.095
Elara	11740	259.6528	0.008



revision 8+

moons.txt - Notepad

Name	Orbital Radius	Orbital Period	Mass
Amalthea	181.4	0.498179	0.074
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
Callisto	1882.7	16.689018	1075.9



revision 9

```
$ svn commit -m "Added data for Himalia, Elara"
```

```
Sending      jupiter/moons.txt
```

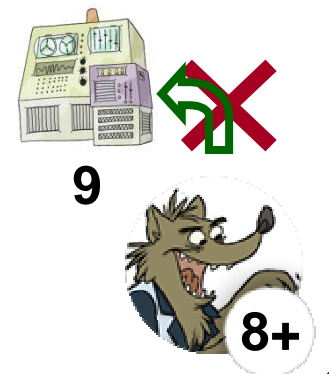
```
svn: Commit failed (details follow):
```

```
svn: File or directory 'moons.txt' is out of date;
```

```
try updating
```

```
svn: resource out of date; try updating
```

```
$
```



```
$ svn commit -m "Added data for Himalia, Elara"
```

```
Sending      jupiter/moons.txt
```

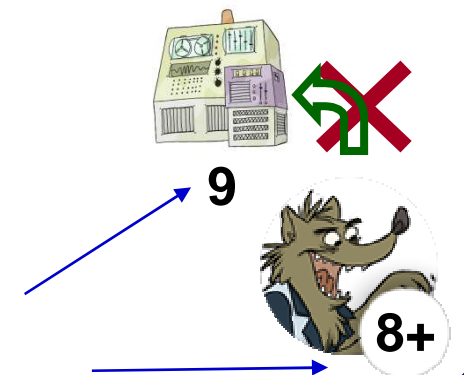
```
svn: Commit failed (details follow):
```

```
svn: File or directory 'moons.txt' is out of date;
```

```
try updating
```

```
svn: resource out of date; try updating
```

```
$
```



```
$ svn commit -m "Added data for Himalia, Elara"
```

```
Sending      jupiter/moons.txt
```

```
svn: Commit failed (details follow):
```

```
svn: File or directory 'moons.txt' is out of date;
```

```
try updating
```

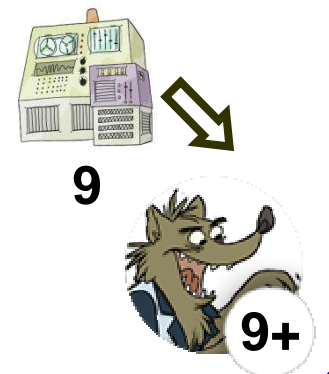
```
svn: resource out of date; try updating
```

```
$ svn update
```

```
G    jupiter/moons.txt
```

```
Updated to revision 9.
```

```
$
```



```
$ svn commit -m "Added data for Himalia, Elara"
```

```
Sending      jupiter/moons.txt
```

```
svn: Commit failed (details follow):
```

```
svn: File or directory 'moons.txt' is out of date;
```

```
try updating
```

```
svn: resource out of date; try updating
```

```
$ svn update
```

```
G    jupiter/moons.txt
```

```
Updated to revision 9.
```

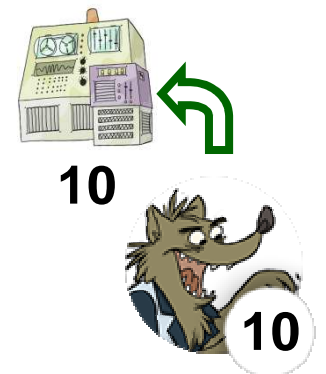
```
$ svn commit -m "Added data for Himalia, Elara"
```

```
Sending      jupiter/moons.txt
```

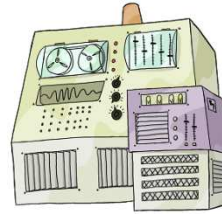
```
Transmitting file data .
```

```
Committed revision 10.
```

```
$
```







revision 10

moons.txt - Notepad

Name	Orbital Radius (10*3 km)	Orbital Period (days)	Mass (10*20 kg)
Amalthea	181.4	0.498179	0.074
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
Callisto	1882.7	16.689018	1075.9
Himalia	11460	250.5662	0.095
Elara	11740	259.6528	0.008

moons.txt - Notepad

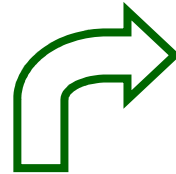
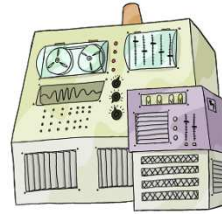
Name	Orbital Radius * 10^3 km	Orbital Period * days	Mass * 10^20 kg
Amalthea	181.4	0.498179	0.074
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
Callisto	1882.7	16.689018	1075.9
Himalia	11460	250.5662	0.095
Elara	11740	259.6528	0.008



revision 10+



revision 9+



revision 11

moons.txt - Notepad

Name	Orbital Radius (10*3 km)	Orbital Period (days)	Mass (10*20 kg)
Amalthea	181.4	0.498179	0.074
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
Callisto	1882.7	16.689018	1075.9
Himalia	11460	250.5662	0.095
Elara	11740	259.6528	0.008



revision 11

moons.txt - Notepad

Name	Orbital Radius * 10^3 km	Orbital Period * days	Mass * 10^20 kg
Amalthea	181.4	0.498179	0.074
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
Callisto	1882.7	16.689018	1075.9
Himalia	11460	250.5662	0.095
Elara	11740	259.6528	0.008



revision 9+

```
$ svn commit -m "Added measurement units"
```

```
Sending          jupiter/moons.txt
```

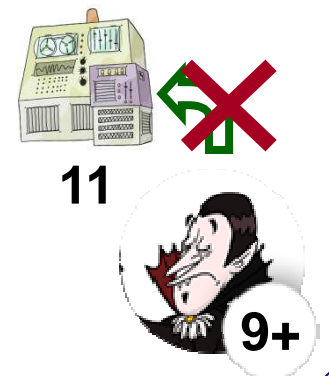
```
svn: Commit failed (details follow):
```

```
svn: File or directory ' moons.txt ' is out of date;
```

```
try updating
```

```
svn: resource out of date; try updating
```

```
$
```



```
$ svn commit -m "Added measurement units"
```

```
Sending          jupiter/moons.txt
```

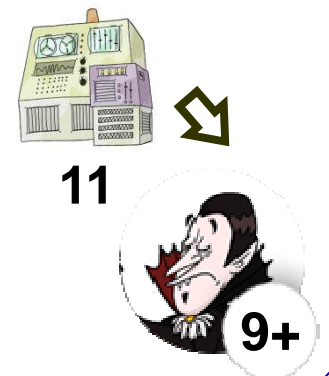
```
svn: Commit failed (details follow):
```

```
svn: File or directory 'moons.txt' is out of date;
```

```
try updating
```

```
svn: resource out of date; try updating
```

```
$ svn update
```



```
$ svn commit -m "Added measurement units"
```

```
Sending          jupiter/moons.txt
```

```
svn: Commit failed (details follow):
```

```
svn: File or directory 'moons.txt' is out of date;
```

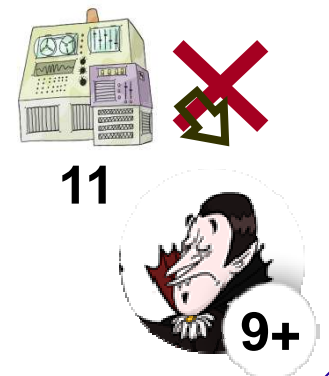
```
try updating
```

```
svn: resource out of date; try updating
```

```
$ svn update
```

```
Conflict discovered in 'jupiter/moons.txt'.
```

```
Select: (p) postpone, (df) diff-full, (e) edit,  
        (mc) mine-conflict, (tc) theirs-conflict,  
        (s) show all options:
```



```
$ svn commit -m "Added measurement units"
```

```
Sending          jupiter/moons.txt
```

```
svn: Commit failed (details follow):
```

```
svn: File or directory ' moons.txt ' is out of date;
```

```
try updating
```

```
svn: resource out of date; try updating
```

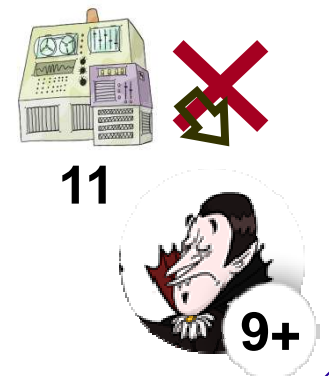
```
$ svn update
```

```
Conflict discovered in 'jupiter/moons.txt'.
```

```
Select: (p) postpone, (df) diff-full, (e) edit,
```

```
(mc) mine-conflict, (tc) theirs-conflict,
```

```
(s) show all options: df ←
```



```

--- jupiter/.svn/text-base moons.txt.svn-base  Fri Oct  1 21:08
+++ jupiter/.svn/tmp/ moons.txt.tmp             Fri Oct  1 22:59
@@ -1,6 +1,11 @@
  Name                Orbital Radius  Orbital Period  Mass
+<<<<<<< .mine
+
+      * 10^3 km      * days      * 10^20 kg
+=====
+      (10**3 km)    (days)    (10**20 kg)
+>>>>>>> .r11
  Amalthea            181.4        0.498179        0.074
  Io                  421.6        1.769138        893.2
  Europa              670.9        3.551181        480.0
  Ganymede            1070.4       7.154553       1481.9
  Callisto            1882.7       16.689018      1075.9
Select: (p) postpone, (df) diff-full, (e) edit, (r) resolved,
        (mc) mine-conflict, (tc) theirs-conflict,
        (s) show all options:

```

```

--- jupiter/.svn/text-base moons.txt.svn-base  Fri Oct  1 21:08
+++ jupiter/.svn/tmp/ moons.txt.tmp             Fri Oct  1 22:59
@@ -1,6 +1,11 @@
  Name                Orbital Radius  Orbital Period  Mass
+<<<<<<< .mine
+
+      * 10^3 km      * days      * 10^20 kg
+=====
+      (10**3 km)    (days)    (10**20 kg)
+>>>>>>> .r11
  Amalthea            181.4        0.498179        0.074
  Io                  421.6        1.769138        893.2
  Europa              670.9        3.551181        480.0
  Ganymede            1070.4       7.154553       1481.9
  Callisto            1882.7       16.689018       1075.9
Select: (p) postpone, (df) diff-full, (e) edit, (r) resolved,
        (mc) mine-conflict, (tc) theirs-conflict,
        (s) show all options:

```



```

--- jupiter/.svn/text-base moons.txt.svn-base  Fri Oct  1 21:08
+++ jupiter/.svn/tmp/ moons.txt.tmp             Fri Oct  1 22:59
@@ -1,6 +1,11 @@
  Name                Orbital Radius  Orbital Period  Mass
+<<<<<<< .mine
+
+      * 10^3 km      * days      * 10^20 kg
+=====
+      (10**3 km)    (days)    (10**20 kg)
+>>>>>>> .r11
  Amalthea            181.4        0.498179        0.074
  Io                  421.6        1.769138        893.2
  Europa              670.9        3.551181        480.0
  Ganymede            1070.4       7.154553       1481.9
  Callisto            1882.7       16.689018       1075.9
Select: (p) postpone, (df) diff-full, (e) edit, (r) resolved,
        (mc) mine-conflict, (tc) theirs-conflict,
        (s) show all options:

```

```

--- jupiter/.svn/text-base moons.txt.svn-base  Fri Oct  1 21:08
+++ jupiter/.svn/tmp/ moons.txt.tmp             Fri Oct  1 22:59
@@ -1,6 +1,11 @@
  Name                Orbital Radius  Orbital Period  Mass
+<<<<<<< .mine
+
+      * 10^3 km      * days      * 10^20 kg
+=====
+      (10**3 km)    (days)    (10**20 kg)
+>>>>>>> .r11
  Amalthea            181.4          0.498179        0.074
  Io                  421.6          1.769138        893.2
  Europa              670.9          3.551181        480.0
  Ganymede            1070.4         7.154553       1481.9
  Callisto            1882.7         16.689018       1075.9
Select: (p) postpone, (df) diff-full, (e) edit, (r) resolved,
        (mc) mine-conflict, (tc) theirs-conflict,
        (s) show all options: e

```

GNU Nano

```

Name           Orbital Radius  Orbital Period  Mass
<<<<<<< .mine
+               * 10^3 km      * days          * 10^20 kg
+=====
+               (10**3 km)    (days)         (10**20 kg)
+>>>>>>> .r11
Amalthea       181.4           0.498179       0.074
Io             421.6           1.769138       893.2
Europa        670.9           3.551181       480.0
Ganymede      1070.4           7.154553       1481.9
Callisto      1882.7           16.689018      1075.9

```

...

GNU Nano

Name                      Orbital Radius    Orbital Period    Mass

<<<<<<< .mine

+                      \* 10^3 km                      \* days                      \* 10^20 kg

+=====

+                      (10\*\*3 km)                      (days)                      (10\*\*20 kg)

+>>>>>>> .r11

Amalthea                      181.4                      0.498179                      0.074

Io                      421.6                      1.769138                      893.2

Europa                      670.9                      3.551181                      480.0

Ganymede                      1070.4                      7.154553                      1481.9

Callisto                      1882.7                      16.689018                      1075.9

...

Name	Orbital Radius	Orbital Period	Mass
Amalthea	181.4	0.4	0.074
Io	421.6	1.7	893.2
Europa	670.9	3.5	480.0
Ganymede	1070.4	7.1	1481.9
Callisto	1882.7	16.7	1075.9
Elara	11740	259	

GNU Nano

Name                      Orbital Radius    Orbital Period    Mass

<<<<<<< .mine

+                      \* 10^3 km                      \* days                      \* 10^20 kg

+=====

+                      (10\*\*3 km)                      (days)                      (10\*\*20 kg)

+>>>>>>> .r11

Amalthea                      181.4                      0.498179                      0.074

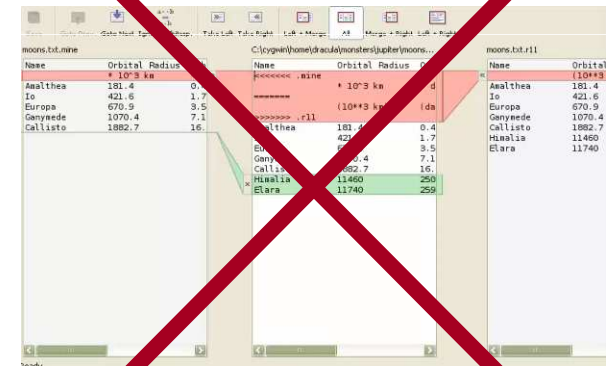
Io                      421.6                      1.769138                      893.2

Europa                      670.9                      3.551181                      480.0

Ganymede                      1070.4                      7.154553                      1481.9

Callisto                      1882.7                      16.689018                      1075.9

...

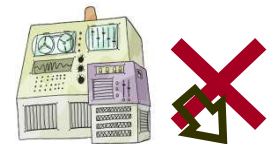


*GNU Nano*

<i>Name</i>	<i>Orbital Radius</i>	<i>Orbital Period</i>	<i>Mass</i>
	<i>* 10<sup>3</sup> km</i>	<i>* days</i>	<i>* 10<sup>20</sup> kg</i>
<i>Amalthea</i>	<i>181.4</i>	<i>0.498179</i>	<i>0.074</i>
<i>Io</i>	<i>421.6</i>	<i>1.769138</i>	<i>893.2</i>
<i>Europa</i>	<i>670.9</i>	<i>3.551181</i>	<i>480.0</i>
<i>Ganymede</i>	<i>1070.4</i>	<i>7.154553</i>	<i>1481.9</i>
<i>Callisto</i>	<i>1882.7</i>	<i>16.689018</i>	<i>1075.9</i>

*...*

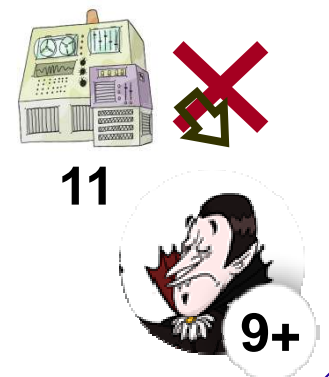
*Select: (p) postpone, (df) diff-full, (e) edit, (r) resolved,  
(mc) mine-conflict, (tc) theirs-conflict,  
(s) show all options:*



11



*Select: (p) postpone, (df) diff-full, (e) edit, (r) resolved,  
(mc) mine-conflict, (tc) theirs-conflict,  
(s) show all options: **r** ←*

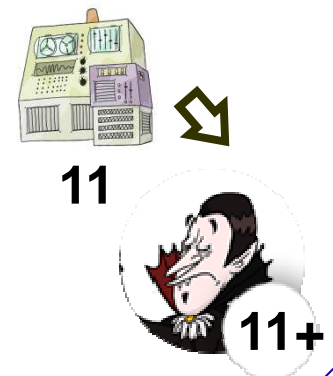




*Select: (p) postpone, (df) diff-full, (e) edit, (r) resolved,  
 (mc) mine-conflict, (tc) theirs-conflict,  
 (s) show all options: r*

*Updated to revision 11.*

\$



Select: (p) postpone, (df) diff-full, (e) edit, (r) resolved,  
 (mc) mine-conflict, (tc) theirs-conflict,  
 (s) show all options: **r**

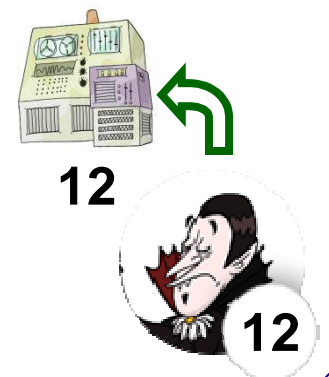
Updated to revision 11.

**\$ svn commit -m "Added measurement units"**

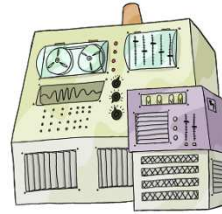
Sending *jupiter/moons.txt*

Transmitting file data .

Committed revision 12.



# Rollback



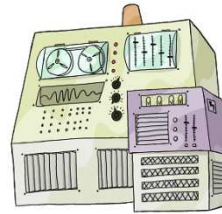
revision 12

moons.txt - Notepad

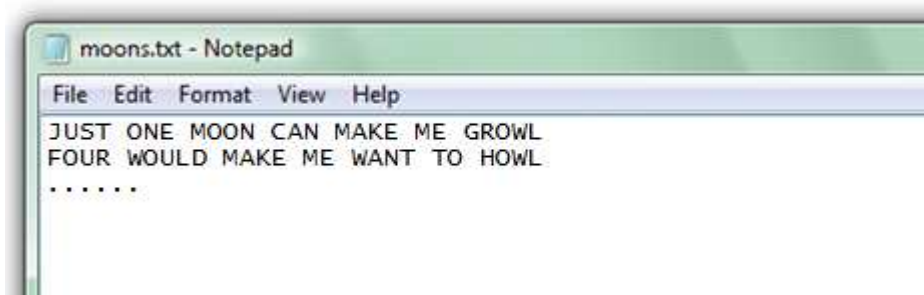
Name	Orbital Radius * 10 <sup>3</sup> km	Orbital Period * days	Mass * 10 <sup>20</sup> kg
Amalthea	181.4	0.498179	0.074
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
Callisto	1882.7	16.689018	1075.9



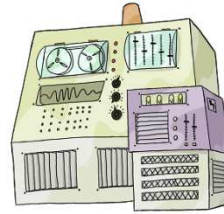
revision 12



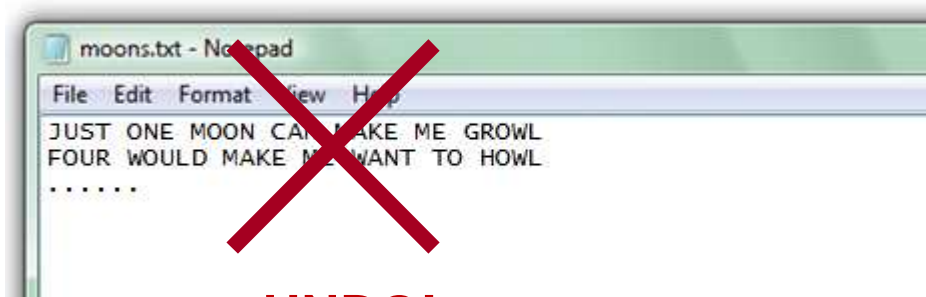
**revision 12**



**revision 12+**



revision 12



**UNDO!**



revision 12+

```
$ cd /cygwin/home/wolfman/monsters/jupiter
```

```
$
```



```
$ cd /cygwin/home/wolfman/monsters/jupiter  
$ svn revert
```





```
$ cd /cygwin/home/wolfman/monsters/jupiter  
$ svn revert moons.txt
```



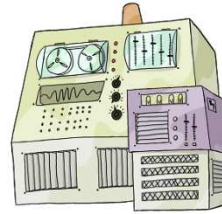
```
$ cd /cygwin/home/wolfman/monsters/jupiter
```

```
$ svn revert moons.txt
```

```
Reverted      moons.txt
```

```
$
```





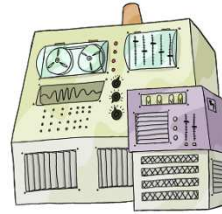
revision 12

moons.txt - Notepad

Name	orbital Radius * 10 <sup>3</sup> km	orbital Period * days	Mass * 10 <sup>20</sup> kg
Amalthea	181.4	0.498179	0.074
Io	421.6	1.769138	893.2
Europa	670.9	3.551181	480.0
Ganymede	1070.4	7.154553	1481.9
Callisto	1882.7	16.689018	1075.9



revision 12



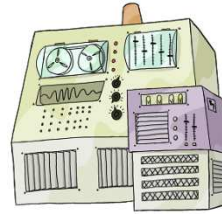
revision 12

moons.txt - Notepad

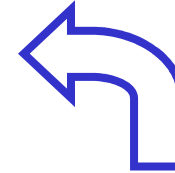
Name	Orbital Radius * km	orbital Period * days	Mass * 10 <sup>20</sup> kg
Amalthea	181,400	0.498179	0.074
Io	421,600	1.769138	893.2
Europa	670,900	3.551181	480.0
Ganymede	1070,400	7.154553	1481.9
Callisto	1882,700	16.689018	1075.9



revision 12+



revision 13

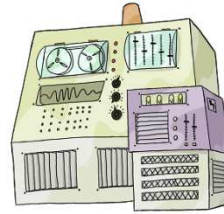


moons.txt - Notepad

Name	Orbital Radius * km	orbital Period * days	Mass * 10 <sup>20</sup> kg
Amalthea	181,400	0.498179	0.074
Io	421,600	1.769138	893.2
Europa	670,900	3.551181	480.0
Ganymede	1070,400	7.154553	1481.9
Callisto	1882,700	16.689018	1075.9



revision 13

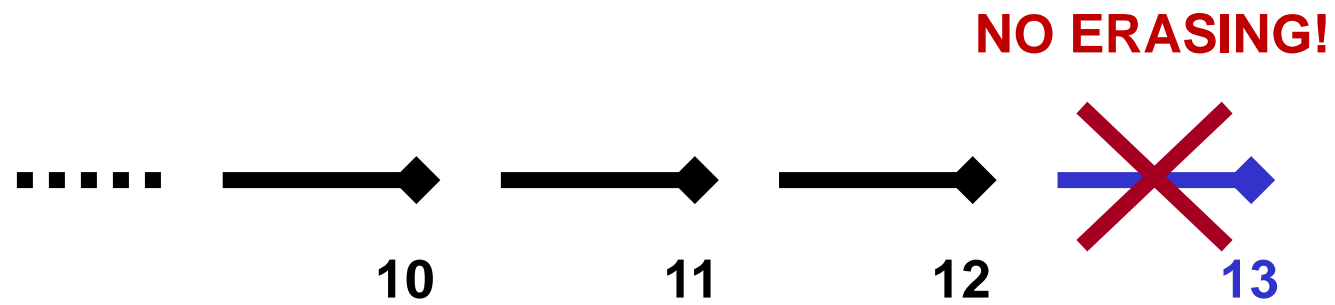


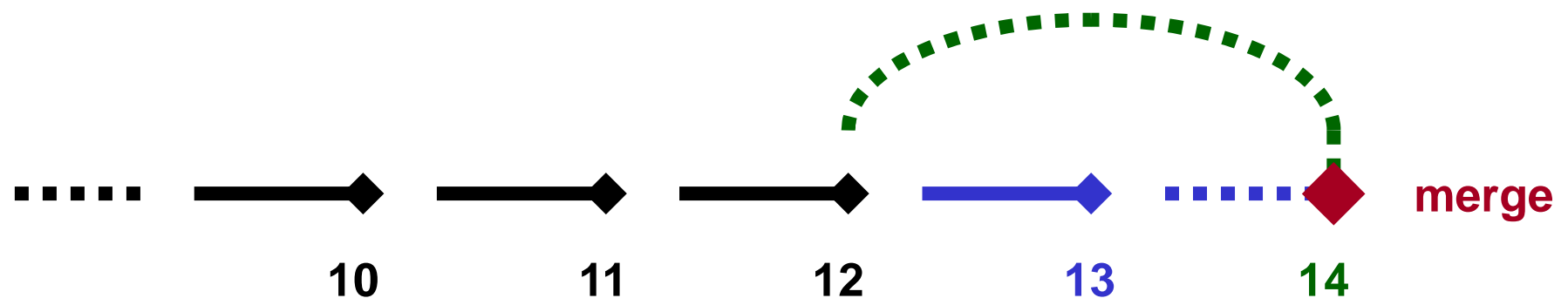
**revision 13**

**I want to reverse!**



**revision 13**







```
$ cd /cygwin/home/dracula/monsters/jupiter  
$ svn merge
```



```
$ cd /cygwin/home/dracula/monsters/jupiter  
$ svn merge -r
```



```
$ cd /cygwin/home/dracula/monsters/jupiter  
$ svn merge -r HEAD:12
```



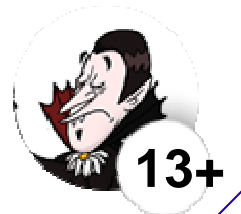
```
$ cd /cygwin/home/dracula/monsters/jupiter  
$ svn merge -r HEAD:12 moons.txt
```



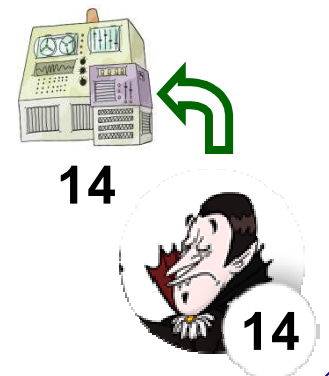
```
$ cd /cygwin/home/dracula/monsters/jupiter  
$ svn merge -r HEAD:12 moons.txt  
-- Reverse-merging r13 into 'moons.txt'  
U  moons.txt  
$
```



```
$ cd /cygwin/home/dracula/monsters/jupiter
$ svn merge -r HEAD:12 moons.txt
-- Reverse-merging r13 into 'moons.txt'
U  moons.txt
$ svn diff
...
$
```



```
$ cd /cygwin/home/dracula/monsters/jupiter
$ svn merge -r HEAD:12 moons.txt
-- Reverse-merging r13 into 'moons.txt'
U  moons.txt
$ svn diff
...
$ svn commit -m "Alright, no commas."
Sending          jupiter/moons.txt
Transmitting file data .
Committed revision 14.
```



svn co	check out repository
svn log	view change history
svn add	add file
svn commit	commit file
svn update	update to most recent revision
svn diff	view differences between revisions
svn merge	merge revisions

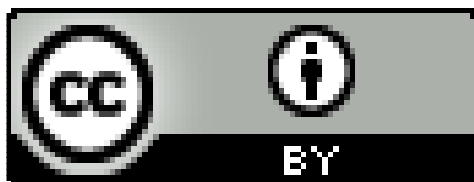




created by

Ainsley Lawson

October 2010



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