



ASSIGNMENT 7

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1. Create a new repository, and create a project named "Asteroids" at the root of your repository. Then create the following folders under "Asteroids": "trunk", "branches", and "tags". Submit a screenshot that shows the content the "Asteroids" folder.

Used svn commands for the same. Below is the screenshot for the same:

```
E:\SMT\Assignment7>svnadmin create E:\SMT\Assignment7\repos

E:\SMT\Assignment7>set SVN_EDITOR=C:/Windows/System32/notepad.exe

E:\SMT\Assignment7>svn import Asteroids file:///Assignment7/Asteroids/Asteroids

Log message unchanged or not specified
(a)bort, (c)ontinue, (e)dit:
c
svn: E180001: Unable to connect to a repository at URL 'file:///Assignment7/Asteroids/Asteroids'
svn: E180001: Unable to open an ra_local session to URL
svn: E180001: Unable to open repository 'file:///Assignment7/Asteroids/Asteroids'

E:\SMT\Assignment7>svn import Asteroids file:///E:/SMT/Assignment7/repos/Asteroids

Log message unchanged or not specified
(a)bort, (c)ontinue, (e)dit:
c

Committed revision 1.

E:\SMT\Assignment7>svn checkout file:///E:/SMT/Assignment7/repos/Asteroids workingcopy
Checked out revision 1.

E:\SMT\Assignment7>cd workingcopy

E:\SMT\Assignment7\workingcopy>svn mkdir trunk
A      trunk

E:\SMT\Assignment7\workingcopy>svn mkdir tags
A      tags

E:\SMT\Assignment7\workingcopy>svn mkdir branches
A      branches
```

```
E:\SMT\Assignment7\workingcopy>svn commit

Log message unchanged or not specified
(a)bort, (c)ontinue, (e)dit:
c
Adding      branches
Adding      tags
Adding      trunk

Committed revision 2.

E:\SMT\Assignment7\workingcopy>svn list -v file:///E:/SMT/Assignment7/repos/Asteroids
  2 Puchu      Dec 05 16:18 ./
  2 Puchu      Dec 05 16:18 branches/
  2 Puchu      Dec 05 16:18 tags/
  2 Puchu      Dec 05 16:18 trunk/

E:\SMT\Assignment7\workingcopy>
```

2. Download the source code from <https://github.com/PSNB92/Asteroids>. Put the unzipped source code (i.e. *.java) of the Asteroids application into the “trunk” folder of the repository. Keep the original file structure (i.e. org.psnbtech.*). Submit another screenshot that shows the content of the source code folder in the repository.

Copied the source code and please find below.

```
E:\SMT\Assignment7\workingcopy\trunk>svn list -v file:///E:/SMT/Assignment7/repos/Asteroids/trunk/org/psnbtech
   3 Puchu          Dec 05 17:28 ./
   3 Puchu        15670 Dec 05 17:28 Game.java
   3 Puchu        5214 Dec 05 17:28 WorldPanel.java
   3 Puchu          Dec 05 17:28 entity/
   3 Puchu          Dec 05 17:28 util/

E:\SMT\Assignment7\workingcopy\trunk>svn list -v file:///E:/SMT/Assignment7/repos/Asteroids/trunk/org/psnbtech/entity
   3 Puchu          Dec 05 17:28 ./
   3 Puchu        4443 Dec 05 17:28 Asteroid.java
   3 Puchu        1791 Dec 05 17:28 AsteroidSize.java
   3 Puchu        1305 Dec 05 17:28 Bullet.java
   3 Puchu        3978 Dec 05 17:28 Entity.java
   3 Puchu        8362 Dec 05 17:28 Player.java

E:\SMT\Assignment7\workingcopy\trunk>svn list -v file:///E:/SMT/Assignment7/repos/Asteroids/trunk/org/psnbtech/util
   3 Puchu          Dec 05 17:28 ./
   3 Puchu        3850 Dec 05 17:28 Clock.java
   3 Puchu        2249 Dec 05 17:28 Vector2.java
```

3. Create three working copies of the Asteroids application. You can do this by checking out the project “Asteroids/trunk” into three different folders, one for each developer (e.g. Bill, Mary, and Ben). The folders you created should be named as AsteroidsBill, AsteroidsMary, and AsteroidsBen.

I have created it for all the three mentioned developers as shown below.

Revision history of Ben:

```
E:\SMT\Assignment7>svn checkout file:///E:/SMT/Assignment7/repos/Asteroids AsteroidsBen
A AsteroidsBen\branches
A AsteroidsBen\tags
A AsteroidsBen\trunk
A AsteroidsBen\trunk\org
A AsteroidsBen\trunk\org\psnbtech
A AsteroidsBen\trunk\org\psnbtech\WorldPanel.java
A AsteroidsBen\trunk\org\psnbtech\Game.java
A AsteroidsBen\trunk\org\psnbtech\entity
A AsteroidsBen\trunk\org\psnbtech\entity\Bullet.java
A AsteroidsBen\trunk\org\psnbtech\entity\Asteroid.java
A AsteroidsBen\trunk\org\psnbtech\entity\Entity.java
A AsteroidsBen\trunk\org\psnbtech\entity\Player.java
A AsteroidsBen\trunk\org\psnbtech\entity\AsteroidSize.java
A AsteroidsBen\trunk\org\psnbtech\util
A AsteroidsBen\trunk\org\psnbtech\util\Clock.java
A AsteroidsBen\trunk\org\psnbtech\util\Vector2.java
Checked out revision 3.
```

Revision history of Bill:

```
E:\SMT\Assignment7\workingcopy\trunk>svn checkout file:///E:/SMT/Assignment7/repos/Asteroids AsteroidsBill
A AsteroidsBill\branches
A AsteroidsBill\tags
A AsteroidsBill\trunk
A AsteroidsBill\trunk\org
A AsteroidsBill\trunk\org\psnbtech
A AsteroidsBill\trunk\org\psnbtech\entity
A AsteroidsBill\trunk\org\psnbtech\entity\Bullet.java
A AsteroidsBill\trunk\org\psnbtech\entity\Asteroid.java
A AsteroidsBill\trunk\org\psnbtech\entity\Entity.java
A AsteroidsBill\trunk\org\psnbtech\entity\Player.java
A AsteroidsBill\trunk\org\psnbtech\entity\AsteroidSize.java
A AsteroidsBill\trunk\org\psnbtech\util
A AsteroidsBill\trunk\org\psnbtech\util\Clock.java
A AsteroidsBill\trunk\org\psnbtech\util\Vector2.java
A AsteroidsBill\trunk\org\psnbtech\WorldPanel.java
A AsteroidsBill\trunk\org\psnbtech\Game.java
Checked out revision 3.
```

Revision history of Mary:

```
E:\SMT\Assignment7\workingcopy\trunk>svn checkout file:///E:/SMT/Assignment7/repos/Asteroids AsteroidsMary
A AsteroidsMary\trunk
A AsteroidsMary\trunk\org
A AsteroidsMary\trunk\org\psnbtech
A AsteroidsMary\trunk\org\psnbtech\WorldPanel.java
A AsteroidsMary\trunk\org\psnbtech\Game.java
A AsteroidsMary\trunk\org\psnbtech\entity
A AsteroidsMary\trunk\org\psnbtech\entity\Entity.java
A AsteroidsMary\trunk\org\psnbtech\entity\Player.java
A AsteroidsMary\trunk\org\psnbtech\entity\AsteroidSize.java
A AsteroidsMary\trunk\org\psnbtech\entity\Bullet.java
A AsteroidsMary\trunk\org\psnbtech\entity\Asteroid.java
A AsteroidsMary\trunk\org\psnbtech\util
A AsteroidsMary\trunk\org\psnbtech\util\Vector2.java
A AsteroidsMary\trunk\org\psnbtech\util\Clock.java
A AsteroidsMary\branches
A AsteroidsMary\tags
Checked out revision 3.
```

4. Simulate the following events by performing the corresponding operations. After each event:

- (1) check the revision number of the Asteroids.java file in the repository and in each working copy, and fill in the table below;
- (2) describe what problems (i.e. conflicts) you had in each event, and how you resolved them.
- (3) submit a screenshot showing the revision numbers of the Java files in Mary's working copy.

EVENT #1: Ben made some changes to Asteroids.java: (1) added a comment “//ignore” at the end of Line 25, and a comment “//test” at the end of Line 30. Then Ben committed his changes to the repository.

Action: As there was changes only by Ben on his working copy and there was update in central repository. Ben working copy got updated using commit and then central repository.

Problem: No Problem encountered. Attached is the screenshot for Mary repository.

Event	Repository	Bill	Mary	Ben
1	4	3	3	4

```
E:\SMT\Assignment7\AsteroidsMary>svn status -v
      3      3 Puchu      .
      3      2 Puchu      branches
      3      2 Puchu      tags
      3      3 Puchu      trunk
      3      3 Puchu      trunk\org
      3      3 Puchu      trunk\org\psnbtech
      3      3 Puchu      trunk\org\psnbtech\Game.java
      3      3 Puchu      trunk\org\psnbtech\WorldPanel.java
      3      3 Puchu      trunk\org\psnbtech\entity
      3      3 Puchu      trunk\org\psnbtech\entity\Asteroid.java
      3      3 Puchu      trunk\org\psnbtech\entity\AsteroidSize.java
      3      3 Puchu      trunk\org\psnbtech\entity\Bullet.java
      3      3 Puchu      trunk\org\psnbtech\entity\Entity.java
      3      3 Puchu      trunk\org\psnbtech\entity\Player.java
      3      3 Puchu      trunk\org\psnbtech\util
      3      3 Puchu      trunk\org\psnbtech\util\Clock.java
      3      3 Puchu      trunk\org\psnbtech\util\Vector2.java
```

EVENT #2: Mary synchronized her working copy with the repository

Action: Mary got the latest version of Asteroid.java from the repository using svn update.

Problem: No Problem encountered.

```
E:\SMT\Assignment7\AsteroidsMary>svn update
Updating '.':
U    trunk\org\psnbtech\entity\Asteroid.java
Updated to revision 4.

E:\SMT\Assignment7\AsteroidsMary>svn status -v
      4      4 Puchu      .
      4      2 Puchu      branches
      4      2 Puchu      tags
      4      4 Puchu      trunk
      4      4 Puchu      trunk\org
      4      4 Puchu      trunk\org\psnbtech
      4      3 Puchu      trunk\org\psnbtech\Game.java
      4      3 Puchu      trunk\org\psnbtech\WorldPanel.java
      4      4 Puchu      trunk\org\psnbtech\entity
      4      4 Puchu      trunk\org\psnbtech\entity\Asteroid.java
      4      3 Puchu      trunk\org\psnbtech\entity\AsteroidSize.java
      4      3 Puchu      trunk\org\psnbtech\entity\Bullet.java
      4      3 Puchu      trunk\org\psnbtech\entity\Entity.java
      4      3 Puchu      trunk\org\psnbtech\entity\Player.java
      4      3 Puchu      trunk\org\psnbtech\util
      4      3 Puchu      trunk\org\psnbtech\util\Clock.java
      4      3 Puchu      trunk\org\psnbtech\util\Vector2.java
```

```

E:\SMT\Assignment7\AsteroidsMary>svn status -v
      4      4 Puchu      .
      4      2 Puchu      branches
      4      2 Puchu      tags
      4      4 Puchu      trunk
      4      4 Puchu      trunk\org
      4      4 Puchu      trunk\org\psnbtech
      4      3 Puchu      trunk\org\psnbtech\Game.java
      4      3 Puchu      trunk\org\psnbtech\WorldPanel.java
      4      4 Puchu      trunk\org\psnbtech\entity
      4      4 Puchu      trunk\org\psnbtech\entity\Asteroid.java
      4      3 Puchu      trunk\org\psnbtech\entity\AsteroidSize.java
      4      3 Puchu      trunk\org\psnbtech\entity\Bullet.java
      4      3 Puchu      trunk\org\psnbtech\entity\Entity.java
      4      3 Puchu      trunk\org\psnbtech\entity\Player.java
      4      3 Puchu      trunk\org\psnbtech\util
      4      3 Puchu      trunk\org\psnbtech\util\Clock.java
      4      3 Puchu      trunk\org\psnbtech\util\Vector2.java

```

Event	Repository	Bill	Mary	Ben
2	4	3	4	4

EVENT #3: Bill made a change to Asteroids.java: added a comment “//package missing.” at the end of line 25. Bill resolved the conflicts, and committed his change to the repository.

Action: Bill tried to update the working copy file to central repository resulting in conflict.

Problem: As the Asteroids.java was different in working repository and the central repository it resulted in conflict. The user need to synchronize, merge and resolve the different first before updating central repository.

Resolution:

So user Bill first edited the file using “e” , then manually edited and used “r” to resolve the file and then then updating in central repository. Attached the screenshot for the same.

```

E:\SMT\Assignment7\AsteroidsBill>svn commit

Log message unchanged or not specified
(a)bort, (c)ontinue, (e)dit:
c
Sending      trunk\org\psnbtech\entity\Asteroid.java
svn: E155011: Commit failed (details follow):
svn: E155011: File 'E:\SMT\Assignment7\AsteroidsBill\trunk\org\psnbtech\entity\Asteroid.java' is out of date
svn: E160028: File '/Asteroids/trunk/org/psnbtech/entity/Asteroid.java' is out of date

E:\SMT\Assignment7\AsteroidsBill>svn update
Updating '.':
C    trunk\org\psnbtech\entity\Asteroid.java
Updated to revision 4.
Conflict discovered in file 'trunk\org\psnbtech\entity\Asteroid.java'.
Select: (p) postpone, (df) show diff, (e) edit file, (m) merge,
        (mc) my side of conflict, (tc) their side of conflict,
        (s) show all options: e
Select: (p) postpone, (df) show diff, (e) edit file, (m) merge,
        (r) mark resolved, (mc) my side of conflict,
        (tc) their side of conflict, (s) show all options: m

```

```

E:\SMT\Assignment7>
E:\SMT\Assignment7>
E:\SMT\Assignment7>cd AsteroidsBill

E:\SMT\Assignment7\AsteroidsBill>svn commit

Log message unchanged or not specified
(a)bort, (c)ontinue, (e)dit:
c
Sending          trunk\org\psnbtech\entity\Asteroid.java
svn: E155011: Commit failed (details follow):
svn: E155011: File 'E:\SMT\Assignment7\AsteroidsBill\trunk\org\psnbtech\entity\Asteroid.java' is out of date
svn: E160028: File '/Asteroids/trunk/org/psnbtech/entity/Asteroid.java' is out of date

```

```

E:\SMT\Assignment7\AsteroidsMary>svn status -v

      4          4 Puchu      .
      4          2 Puchu      branches
      4          2 Puchu      tags
      4          4 Puchu      trunk
      4          4 Puchu      trunk\org
      4          4 Puchu      trunk\org\psnbtech
      4          3 Puchu      trunk\org\psnbtech\Game.java
      4          3 Puchu      trunk\org\psnbtech\WorldPanel.java
      4          4 Puchu      trunk\org\psnbtech\entity
      4          4 Puchu      trunk\org\psnbtech\entity\Asteroid.java
      4          3 Puchu      trunk\org\psnbtech\entity\AsteroidSize.java
      4          3 Puchu      trunk\org\psnbtech\entity\Bullet.java
      4          3 Puchu      trunk\org\psnbtech\entity\Entity.java
      4          3 Puchu      trunk\org\psnbtech\entity\Player.java
      4          3 Puchu      trunk\org\psnbtech\util
      4          3 Puchu      trunk\org\psnbtech\util\Clock.java
      4          3 Puchu      trunk\org\psnbtech\util\Vector2.java

```

Event	Repository	Bill	Mary	Ben
3	5	5	4	4

EVENT #4: Bill changed the file, Clock.java (e.g. removed the fifth line of code). He then committed his change to the repository.

Action: Bill only changed Clock.java file. On Clock.java file got updated to version 6 .

Problem: No Problem as there was no conflict with SVN central repository.

```

E:\SMT\Assignment7\AsteroidsBill>svn commit

Log message unchanged or not specified
(a)bort, (c)ontinue, (e)dit:
c
Sending          trunk\org\psnbtech\util\Clock.java
Transmitting file data .
Committed revision 6.

```



```

E:\SMT\Assignment7\AsteroidsMary>svn status -v
      4      4 Puchu      .
      4      2 Puchu      branches
      4      2 Puchu      tags
      4      4 Puchu      trunk
      4      4 Puchu      trunk\org
      4      4 Puchu      trunk\org\psnbtech
      4      3 Puchu      trunk\org\psnbtech\Game.java
      4      3 Puchu      trunk\org\psnbtech\WorldPanel.java
      4      4 Puchu      trunk\org\psnbtech\entity
      4      4 Puchu      trunk\org\psnbtech\entity\Asteroid.java
      4      3 Puchu      trunk\org\psnbtech\entity\AsteroidSize.java
      4      3 Puchu      trunk\org\psnbtech\entity\Bullet.java
      4      3 Puchu      trunk\org\psnbtech\entity\Entity.java
      4      3 Puchu      trunk\org\psnbtech\entity\Player.java
      4      3 Puchu      trunk\org\psnbtech\util
      4      3 Puchu      trunk\org\psnbtech\util\Clock.java
      4      3 Puchu      trunk\org\psnbtech\util\Vector2.java

```

Event	Repository	Bill	Mary	Ben
4	5	5	4	4

EVENT #5: Ben synchronized his working copy with the repository.

Action: Ben got the latest copy of Asteroid.java from central repository using svn update command.

Problem: No Problem

Event	Repository	Bill	Mary	Ben
5	5	5	4	5

```

E:\SMT\Assignment7\AsteroidsMary>svn status -v
      4      4 Puchu      .
      4      2 Puchu      branches
      4      2 Puchu      tags
      4      4 Puchu      trunk
      4      4 Puchu      trunk\org
      4      4 Puchu      trunk\org\psnbtech
      4      3 Puchu      trunk\org\psnbtech\Game.java
      4      3 Puchu      trunk\org\psnbtech\WorldPanel.java
      4      4 Puchu      trunk\org\psnbtech\entity
      4      4 Puchu      trunk\org\psnbtech\entity\Asteroid.java
      4      3 Puchu      trunk\org\psnbtech\entity\AsteroidSize.java
      4      3 Puchu      trunk\org\psnbtech\entity\Bullet.java
      4      3 Puchu      trunk\org\psnbtech\entity\Entity.java
      4      3 Puchu      trunk\org\psnbtech\entity\Player.java
      4      3 Puchu      trunk\org\psnbtech\util
      4      3 Puchu      trunk\org\psnbtech\util\Clock.java
      4      3 Puchu      trunk\org\psnbtech\util\Vector2.java

```


EVENT #6: Mary and Bill both synchronized their working copies with the repository.

Action: Mary and Bill got the latest copy of asteroid.java from the central repository using svn update and their versions got updated.

Problem: No Problem

```
E:\SMT\Assignment7\AsteroidsMary>svn update
Updating '.':
U    trunk\org\psnbtech\entity\Asteroid.java
U    trunk\org\psnbtech\util\Clock.java
Updated to revision 6.
```

```
E:\SMT\Assignment7\AsteroidsBill>svn update
Updating '.':
At revision 6.
```

```
E:\SMT\Assignment7\AsteroidsMary>svn status -v
      6          6 Puchu      .
      6          2 Puchu      branches
      6          2 Puchu      tags
      6          6 Puchu      trunk
      6          6 Puchu      trunk\org
      6          6 Puchu      trunk\org\psnbtech
      6          3 Puchu      trunk\org\psnbtech\Game.java
      6          3 Puchu      trunk\org\psnbtech\WorldPanel.java
      6          5 Puchu      trunk\org\psnbtech\entity
      6          5 Puchu      trunk\org\psnbtech\entity\Asteroid.java
      6          3 Puchu      trunk\org\psnbtech\entity\AsteroidSize.java
      6          3 Puchu      trunk\org\psnbtech\entity\Bullet.java
      6          3 Puchu      trunk\org\psnbtech\entity\Entity.java
      6          3 Puchu      trunk\org\psnbtech\entity\Player.java
      6          6 Puchu      trunk\org\psnbtech\util
      6          6 Puchu      trunk\org\psnbtech\util\Clock.java
      6          3 Puchu      trunk\org\psnbtech\util\Vector2.java
```

Event	Repository	Bill	Mary	Ben
6	5	5	5	5