



Software Methods and Tools

Assignment – 7

Submitted By:

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Question 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.

Solution: Below is the screenshot that is showing the contents of Asteroid project that I have created under my repository “repo”.

```
C:\Users\AnkitaW\Desktop\WorkingCopyOne>svn list -v file:///C:/Users/AnkitaW/Desktop/repo/Asteroid
      2 AnkitaW          Dec 04 00:24 ./
      2 AnkitaW          Dec 04 00:24 branches/
      2 AnkitaW          Dec 04 00:24 tags/
      2 AnkitaW          Dec 04 00:24 trunk/
```

Question2: 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.

Solution: Below is the screenshot showing source code in my “repo” folder. I have kept the original file structure i.e. org/psnbtech. Created these directories under trunk as given in the assignment.

```
C:\Users\AnkitaW\Desktop\WorkingCopyOne\trunk>svn list -v file:///C:/Users/AnkitaW/Desktop/repo/Asteroid/trunk/org/psnbtech
      3 AnkitaW          Dec 04 00:32 ./
      3 AnkitaW      15670 Dec 04 00:32 Game.java
      3 AnkitaW       5214 Dec 04 00:32 WorldPanel.java
      3 AnkitaW          Dec 04 00:32 entity/
      3 AnkitaW          Dec 04 00:32 util/

C:\Users\AnkitaW\Desktop\WorkingCopyOne\trunk>svn list -v file:///C:/Users/AnkitaW/Desktop/repo/Asteroid/trunk/org/psnbtech/entity
      3 AnkitaW          Dec 04 00:32 ./
      3 AnkitaW       4443 Dec 04 00:32 Asteroid.java
      3 AnkitaW       1791 Dec 04 00:32 AsteroidSize.java
      3 AnkitaW       1305 Dec 04 00:32 Bullet.java
      3 AnkitaW       3978 Dec 04 00:32 Entity.java
      3 AnkitaW       8362 Dec 04 00:32 Player.java

C:\Users\AnkitaW\Desktop\WorkingCopyOne\trunk>svn list -v file:///C:/Users/AnkitaW/Desktop/repo/Asteroid/trunk/org/psnbtech/util
      3 AnkitaW          Dec 04 00:32 ./
      3 AnkitaW       3850 Dec 04 00:32 Clock.java
      3 AnkitaW       2249 Dec 04 00:32 Vector2.java
```

Question3: 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.

Solution: Below is the screenshot showing source code in my “Asteroidmary” folder.

I used this command ” **svn checkout**

file:///C:/Users/AnkitaW/Desktop/repo/Asteroid AsteroidMary” to check out the source code in the folder AsteroidsBill, AsteroidsMary, and AsteroidsBen

Checked out revision 3.

```
C:\Users\AnkitaW\Desktop\AsteroidMary>svn status -v
      3      3 AnkitaW      .
      3      2 AnkitaW      branches
      3      2 AnkitaW      tags
      3      3 AnkitaW      trunk
      3      3 AnkitaW      trunk\org
      3      3 AnkitaW      trunk\org\psnbtech
      3      3 AnkitaW      trunk\org\psnbtech\Game.java
      3      3 AnkitaW      trunk\org\psnbtech\WorldPanel.java
      3      3 AnkitaW      trunk\org\psnbtech\entity
      3      3 AnkitaW      trunk\org\psnbtech\entity\Asteroid.java
      3      3 AnkitaW      trunk\org\psnbtech\entity\AsteroidSize.java
      3      3 AnkitaW      trunk\org\psnbtech\entity\Bullet.java
      3      3 AnkitaW      trunk\org\psnbtech\entity\Entity.java
      3      3 AnkitaW      trunk\org\psnbtech\entity\Player.java
      3      3 AnkitaW      trunk\org\psnbtech\util
      3      3 AnkitaW      trunk\org\psnbtech\util\Clock.java
      3      3 AnkitaW      trunk\org\psnbtech\util\Vector2.java
```

Question4: 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 “//igore” at the end of Line 25, and a comment “//test” at the end of Line 30. Then Ben committed his changes to the repository.

Event	Repository	Bill	Mary	Ben
1	4	3	3	4

Description: Earlier Checked out revision was 3 after do **svn commit** Ben’s working copy and repository changed to 4. Because Bens did some changes to asteroid.java file

Mary’s revision history is still 3 because she has not done any changes. Below is the screenshot shows the revision history of Mary’s working copy.

```
C:\Users\AnkitaW\Desktop\AsteroidMary>svn status -v
      3      3 AnkitaW      .
      3      2 AnkitaW      branches
      3      2 AnkitaW      tags
      3      3 AnkitaW      trunk
      3      3 AnkitaW      trunk\org
      3      3 AnkitaW      trunk\org\psnbtech
      3      3 AnkitaW      trunk\org\psnbtech\Game.java
      3      3 AnkitaW      trunk\org\psnbtech\WorldPanel.java
      3      3 AnkitaW      trunk\org\psnbtech\entity
      3      3 AnkitaW      trunk\org\psnbtech\entity\Asteroid.java
      3      3 AnkitaW      trunk\org\psnbtech\entity\AsteroidSize.java
      3      3 AnkitaW      trunk\org\psnbtech\entity\Bullet.java
      3      3 AnkitaW      trunk\org\psnbtech\entity\Entity.java
      3      3 AnkitaW      trunk\org\psnbtech\entity\Player.java
      3      3 AnkitaW      trunk\org\psnbtech\util
      3      3 AnkitaW      trunk\org\psnbtech\util\Clock.java
      3      3 AnkitaW      trunk\org\psnbtech\util\Vector2.java
```

Event#2: Mary synchronized her working copy with the repository.

Event	Repository	Bill	Mary	Ben
2	4	3	4	4

Description: Mary wants to synchronize her working copy so she has run the command **svn update** and her revision is updated to 4.

Mary's revision history is 4 because she has synchronized. Below is the screenshot shows the revision history of Mary's working copy.

```
C:\Users\AnkitaW\Desktop\AsteroidMary>svn status -v
      4      4 AnkitaW      .
      4      2 AnkitaW      branches
      4      2 AnkitaW      tags
      4      4 AnkitaW      trunk
      4      4 AnkitaW      trunk\org
      4      4 AnkitaW      trunk\org\psnbtech
      4      3 AnkitaW      trunk\org\psnbtech\Game.java
      4      3 AnkitaW      trunk\org\psnbtech\WorldPanel.java
      4      4 AnkitaW      trunk\org\psnbtech\entity
      4      4 AnkitaW      trunk\org\psnbtech\entity\Asteroid.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\AsteroidSize.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Bullet.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Entity.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Player.java
      4      3 AnkitaW      trunk\org\psnbtech\util
      4      3 AnkitaW      trunk\org\psnbtech\util\Clock.java
      4      3 AnkitaW      trunk\org\psnbtech\util\Vector2.java
```

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.

Event	Repository	Bill	Mary	Ben
3	5	5	4	4

Description: Bill has not updated the revision history and he is trying to commit the same changes which was done by Ben in Asteroids.java file. So the commit got failed and there is a conflict because he has done the changes on same line 25. Now he has done SVN update then he has committed his new changes.

Mary's revision history is still 4 because she has not done any changes. Below is the screenshot shows the Conflicts and the revision history of Mary's working copy.

```

C:\Users\AnkitaW\Desktop\AsteroidBill>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: r
Resolved conflicted state of 'trunk\org\psnbtech\entity\Asteroid.java'
Summary of conflicts:
  Text conflicts: 0 remaining (and 1 already resolved)

C:\Users\AnkitaW\Desktop\AsteroidBill>svn commit

Log message unchanged or not specified
(a)bort, (c)ontinue, (e)dit:
c
Sending      trunk\org\psnbtech\entity\Asteroid.java
Transmitting file data .
Committed revision 5.

```

```

C:\Users\AnkitaW\Desktop\AsteroidMary>svn status -v
      4      4 AnkitaW      .
      4      2 AnkitaW      branches
      4      2 AnkitaW      tags
      4      4 AnkitaW      trunk
      4      4 AnkitaW      trunk\org
      4      4 AnkitaW      trunk\org\psnbtech
      4      3 AnkitaW      trunk\org\psnbtech\Game.java
      4      3 AnkitaW      trunk\org\psnbtech\WorldPanel.java
      4      4 AnkitaW      trunk\org\psnbtech\entity
      4      4 AnkitaW      trunk\org\psnbtech\entity\Asteroid.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\AsteroidSize.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Bullet.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Entity.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Player.java
      4      3 AnkitaW      trunk\org\psnbtech\util
      4      3 AnkitaW      trunk\org\psnbtech\util\Clock.java
      4      3 AnkitaW      trunk\org\psnbtech\util\Vector2.java

C:\Users\AnkitaW\Desktop\AsteroidMary>cd

```

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

Event	Repository	Bill	Mary	Ben
4	5	5	4	4

Description: Bill now done some changes on clock.java file now the revision changed to 6. Here we are checking the revision history for asteroid.java file

Mary's revision history is still 4 because she has not done any changes. Below is the screenshot shows the revision history of Mary's working copy.

```
C:\Users\AnkitaW\Desktop\AsteroidMary>svn status -v
      4      4 AnkitaW      .
      4      2 AnkitaW      branches
      4      2 AnkitaW      tags
      4      4 AnkitaW      trunk
      4      4 AnkitaW      trunk\org
      4      4 AnkitaW      trunk\org\psnbtech
      4      3 AnkitaW      trunk\org\psnbtech\Game.java
      4      3 AnkitaW      trunk\org\psnbtech\WorldPanel.java
      4      4 AnkitaW      trunk\org\psnbtech\entity
      4      4 AnkitaW      trunk\org\psnbtech\entity\Asteroid.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\AsteroidSize.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Bullet.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Entity.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Player.java
      4      3 AnkitaW      trunk\org\psnbtech\util
      4      3 AnkitaW      trunk\org\psnbtech\util\Clock.java
      4      3 AnkitaW      trunk\org\psnbtech\util\Vector2.java
```

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

Event	Repository	Bill	Mary	Ben
5	5	5	4	5

Description: Ben's wants to synchronized his working copy so he has run the command **svn update** and his revision is updated to 5.

Mary's revision history is still 3 because she has not done any changes. Below is the screenshot shows the revision history of Mary's working copy.

```
C:\Users\AnkitaW\Desktop\AsteroidMary>svn status -v
      4      4 AnkitaW      .
      4      2 AnkitaW      branches
      4      2 AnkitaW      tags
      4      4 AnkitaW      trunk
      4      4 AnkitaW      trunk\org
      4      4 AnkitaW      trunk\org\psnbtech
      4      3 AnkitaW      trunk\org\psnbtech\Game.java
      4      3 AnkitaW      trunk\org\psnbtech\WorldPanel.java
      4      4 AnkitaW      trunk\org\psnbtech\entity
      4      4 AnkitaW      trunk\org\psnbtech\entity\Asteroid.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\AsteroidSize.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Bullet.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Entity.java
      4      3 AnkitaW      trunk\org\psnbtech\entity\Player.java
      4      3 AnkitaW      trunk\org\psnbtech\util
      4      3 AnkitaW      trunk\org\psnbtech\util\Clock.java
      4      3 AnkitaW      trunk\org\psnbtech\util\Vector2.java
```

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

Event	Repository	Bill	Mary	Ben
5	5	5	5	5

Description: Bill and Mary wants to synchronized their working copy so Mary revision is updated to 5 and Mary revision is updated to 5 for asteroid.java.

Mary's revision history is now 5 because she has synchronized . Below is the screenshot shows the revision history of Mary's working copy.


```
C:\Users\AnkitaW\Desktop\AsteroidMary>svn update
```

```
Updating '.':
```

```
U    trunk\org\psnbtech\entity\Asteroid.java
```

```
U    trunk\org\psnbtech\util\Clock.java
```

```
Updated to revision 6.
```

```
C:\Users\AnkitaW\Desktop\AsteroidMary>svn status -v
```

6	6	AnkitaW	.
6	2	AnkitaW	branches
6	2	AnkitaW	tags
6	6	AnkitaW	trunk
6	6	AnkitaW	trunk\org
6	6	AnkitaW	trunk\org\psnbtech
6	3	AnkitaW	trunk\org\psnbtech\Game.java
6	3	AnkitaW	trunk\org\psnbtech\WorldPanel.java
6	5	AnkitaW	trunk\org\psnbtech\entity
6	5	AnkitaW	trunk\org\psnbtech\entity\Asteroid.java
6	3	AnkitaW	trunk\org\psnbtech\entity\AsteroidSize.java
6	3	AnkitaW	trunk\org\psnbtech\entity\Bullet.java
6	3	AnkitaW	trunk\org\psnbtech\entity\Entity.java
6	3	AnkitaW	trunk\org\psnbtech\entity\Player.java
6	6	AnkitaW	trunk\org\psnbtech\util
6	6	AnkitaW	trunk\org\psnbtech\util\Clock.java
6	3	AnkitaW	trunk\org\psnbtech\util\Vector2.java

