

Test Cases

Serial Number	Functionality	Description	Expected Output	Actual Output
1	Create Repo	Create a repository for the given project source tree	A repository is created with project source tree.	A repository was created with project source tree.
2	List	Display the existing manifest file names and their labels.	The existing manifest file names and their labels should be displayed.	The existing manifest file names and their labels were displayed.
3	Check In	The check-in ability lets the user update the repository (repo) with new version (snapshot) of a project tree for this repo.	The user should be able to update the repository with new version of the project tree.	The user was able to update the repository with new version of the project tree.
4	Check Out	The check-out ability lets a user recreate a specific version (snapshot) of the project tree.	The user should be able to recreate a specific version of a project tree.	The user was able to recreate a specific version of a project tree.
5	Merge In	Add the ability to merge two project trees snapshots	Two project trees Snapshots should be merged.	Two project trees Snapshots were merged.
6	Merge Out	The merge-out command will gather the information needed for the user to manually do a 3-way merge.	The merge out command is executed so that user manually does a 3-way merge.	The merge out command was executed and user was able to manually do a 3-way merge.

Testing & Verification (Phase 1)

Test that the code to implement the Create Repo use-case works

1. On a minimal ptree containing one file:

```
CR      mypt
ch mypt 1      ./mypt/hx.txt.txt      2019-11-30 15:49:44      ./mypt/hx/0-L0.txt      1
```

2. On a tiny ptree containing an extra folder with three files files:

```
CR      mypt2
ch mypt2 1      ./mypt2/hx.txt      2019-11-30 15:53:50      ./mypt2/hx/0-L0.txt      1
ch mypt2 1      ./mypt2/stuff/goodbye.txt      2019-11-30 15:53:50
      ./mypt2/stuff/goodbye/176e-L13.txt      1
ch mypt2 1      ./mypt2/stuff/hello.txt      2019-11-30 15:53:50
      ./mypt2/stuff/hello/1f02-L13.txt      1
```

3. Create a repository of your main source code project tree of files.

```
CR      SWEP
ch SWEP 1      ./SWEP/main.js      2019-11-30 16:0:31      ./SWEP/main/32131d-L6332.js      1
```

Testing & Verification (Phase 2)

1. Create-repo of your project #1 code project-tree.

```
CR      Project1
ch Project1 1      ./Project1/SE PROJECT PHASE 1/bundle.js      2019-11-30 16:6:27
      ./Project1/SE PROJECT PHASE 1/bundle/20a2a3-L3992.js      1
ch Project1 1      ./Project1/SE PROJECT PHASE 1/package.json      2019-11-30 16:6:27
      ./Project1/SE PROJECT PHASE 1/package/2415d-L338.json      1
ch Project1 1      ./Project1/SE PROJECT PHASE 1/README.md      2019-11-30 16:6:27
      ./Project1/SE PROJECT PHASE 1/README/331d6-L379.md      1
ch Project1 1      ./Project1/SE PROJECT PHASE 1/server.js      2019-11-30 16:6:28
      ./Project1/SE PROJECT PHASE 1/server/854c6-L929.js      1
```

```

ch Project1 1      . /Project1/SE PROJECT PHASE 1/views/client.js      2019-11-30 16:6:28
. /Project1/SE PROJECT PHASE 1/views/client/1bcd40-L3477.js 1

ch Project1 1      . /Project1/SE PROJECT PHASE 1/views/index.html    2019-11-30 16:6:28
. /Project1/SE PROJECT PHASE 1/views/index/129bca-L2386.html 1

ch Project1 1      . /Project1/SE PROJECT PHASE 1/router/main.js      2019-11-30 16:6:28
. /Project1/SE PROJECT PHASE 1/router/main/32131d-L6332.js 1

```

2. Then make mods and check-out to a new path location.

```

check-out Project1 ModProject1 1      . /Project1/SE PROJECT PHASE 1/bundle/20a2a3-L3992.js
2019-11-30 16:9:35      . /ModProject1/SE PROJECT PHASE 1/bundle.js . /ModProject1

check-out Project1 ModProject1 1      . /Project1/SE PROJECT PHASE 1/package/2415d-L338.json
2019-11-30 16:9:35      . /ModProject1/SE PROJECT PHASE 1/package.json      . /ModProject1

check-out Project1 ModProject1 1      . /Project1/SE PROJECT PHASE 1/README/331d6-L379.md
2019-11-30 16:9:35      . /ModProject1/SE PROJECT PHASE 1/README.md      . /ModProject1

check-out Project1 ModProject1 1      . /Project1/SE PROJECT PHASE 1/server/854c6-L929.js
2019-11-30 16:9:35      . /ModProject1/SE PROJECT PHASE 1/server.js . /ModProject1

check-out Project1 ModProject1 1      . /Project1/SE PROJECT PHASE 1/views/client/1bcd40-
L3477.js      2019-11-30 16:9:35      . /ModProject1/SE PROJECT PHASE 1/views/client.js
. /ModProject1

check-out Project1 ModProject1 1      . /Project1/SE PROJECT PHASE 1/views/index/129bca-
L2386.html    2019-11-30 16:9:35      . /ModProject1/SE PROJECT PHASE 1/views/index.html
. /ModProject1

check-out Project1 ModProject1 1      . /Project1/SE PROJECT PHASE 1/router/main/32131d-
L6332.js      2019-11-30 16:9:35      . /ModProject1/SE PROJECT PHASE 1/router/main.js
. /ModProject1

```

3. Make mods and check-the modified project-tree into the repo.

```

ch Project1 ModProject1 Alice1      . /Project1/ModProject1/SE PROJECT PHASE 1/bundle.js 2019-
11-30 16:14:57 . /Project1/ModProject1/SE PROJECT PHASE 1/bundle/20a2a3-L3992.js
ALICE1

ch Project1 ModProject1 Alice1      . /Project1/ModProject1/SE PROJECT PHASE 1/package.json
2019-11-30 16:14:57 . /Project1/ModProject1/SE PROJECT PHASE 1/package/2b411-L391.json
ALICE1

```

```
ch Project1 ModProject1 Alice1      ./Project1/ModProject1/SE PROJECT PHASE 1/README.md
2019-11-30 16:14:57    ./Project1/ModProject1/SE PROJECT PHASE 1/README/331d6-L379.md
ALICE1
```

```
ch Project1 ModProject1 Alice1      ./Project1/ModProject1/SE PROJECT PHASE 1/server.js
2019-11-30 16:14:57    ./Project1/ModProject1/SE PROJECT PHASE 1/server/854c6-L929.js
ALICE1
```

```
ch Project1 ModProject1 Alice1      ./Project1/ModProject1/SE PROJECT PHASE 1/views/client.js
2019-11-30 16:14:57    ./Project1/ModProject1/SE PROJECT PHASE 1/views/client/1bcd40-L3477.js
ALICE1
```

```
ch Project1 ModProject1 Alice1      ./Project1/ModProject1/SE PROJECT PHASE 1/views/index.html
2019-11-30 16:14:57    ./Project1/ModProject1/SE PROJECT PHASE 1/views/index/129bca-L2386.html
ALICE1
```

```
ch Project1 ModProject1 Alice1      ./Project1/ModProject1/SE PROJECT PHASE 1/router/main.js
2019-11-30 16:14:57    ./Project1/ModProject1/SE PROJECT PHASE 1/router/main/32131d-L6332.js
ALICE1
```

4. Check that you can add the labels “Alice 1” to a manifest and then that you can and select that manifest for check-out with either label as well as by specifying its filename.

```
check-out Project1 AliceVersion Alice1      ./Project1/ModProject1/SE PROJECT PHASE
1/bundle/20a2a3-L3992.js                    2019-11-30 16:22:18
./AliceVersion/ModProject1/SE PROJECT PHASE 1/bundle.js      ./AliceVersion
```

```
check-out Project1 AliceVersion Alice1      ./Project1/ModProject1/SE PROJECT PHASE
1/package/2b411-L391.json                   2019-11-30 16:22:18
./AliceVersion/ModProject1/SE PROJECT PHASE 1/package.json   ./AliceVersion
```

```
check-out Project1 AliceVersion Alice1      ./Project1/ModProject1/SE PROJECT PHASE
1/README/331d6-L379.md                     2019-11-30 16:22:18
./AliceVersion/ModProject1/SE PROJECT PHASE 1/README.md      ./AliceVersion
```

```
check-out Project1 AliceVersion Alice1      ./Project1/ModProject1/SE PROJECT PHASE
1/server/854c6-L929.js                     2019-11-30 16:22:18
./AliceVersion/ModProject1/SE PROJECT PHASE 1/server.js      ./AliceVersion
```

check-out Project1 AliceVersion Alice1	./Project1/ModProject1/SE PROJECT PHASE	
1/views/client/1bcd40-L3477.js		2019-11-30 16:22:18
./AliceVersion/ModProject1/SE PROJECT PHASE 1/views/client.js	./AliceVersion	
check-out Project1 AliceVersion Alice1	./Project1/ModProject1/SE PROJECT PHASE	
1/views/index/129bca-L2386.html		2019-11-30 16:22:18
./AliceVersion/ModProject1/SE PROJECT PHASE 1/views/index.html	./AliceVersion	
check-out Project1 AliceVersion Alice1	./Project1/ModProject1/SE PROJECT PHASE	
1/router/main/32131d-L6332.js		2019-11-30 16:22:19
./AliceVersion/ModProject1/SE PROJECT PHASE 1/router/main.js	./AliceVersion	

Testing & Verification (Phase 3)

1. Test for conflict-file resulting in MT, MR, and MG files

merge-out a 2 3 y	./a/sample/simple/0-L0.txt	2019-11-30 16:58:56
	./y/sample/simple_MR.txt	
merge-out a 2 3 y	./a/sample/simple/0-L0.txt	2019-11-30 16:58:56
	./y/sample/simple_MG.txt	
merge-out a 2 3 y	./a/sample/simple/0-L0.txt	2019-11-30 16:58:56
	./y/sample/simple_MT.txt	

2. Test for non-conflict file (where the R and T files are identical, or where one of them doesn't exist)

CR	nr	
ch nr 1	./nr/sample/new.txt	2019-12-1 14:36:29
	./nr/sample/new/43c-L3.txt 1	
ch nr 1	./nr/sample/sample.txt	2019-12-1 14:36:29
	./nr/sample/sample/43c-L3.txt 1	
ch nr 2	./nr/sample/new.txt	2019-12-1 14:37:23
	./nr/sample/new/c60b-L110.txt 2	
ch nr 2	./nr/sample/sample.txt	2019-12-1 14:37:23
	./nr/sample/sample/43c-L3.txt 2	
check-out nr target10 2	./nr/sample/new/c60b-L110.txt	2019-12-1 14:37:45
	./target10/sample/new.txt ./target10	

check-out nr target10 2	./nr/sample/sample/43c-L3.txt	2019-12-1 14:37:45
	./target10/sample/sample.txt ./target10	
ch nr target10 3	./nr/sample/new.txt	2019-12-1 14:38:44
	./nr/sample/new/13071-L173.txt 3	
ch nr target10 3	./nr/sample/sample.txt	2019-12-1 14:38:44
	./nr/sample/sample/43c-L3.txt 3	
check-out nr target20 3	./nr/sample/new/13071-L173.txt	2019-12-1 14:40:1
	./target20/sample/new.txt ./target20	
check-out nr target20 3	./nr/sample/sample/43c-L3.txt	2019-12-1 14:40:1
	./target20/sample/sample.txt ./target20	