

IT-313
Software Engineering
Lab-VI Report



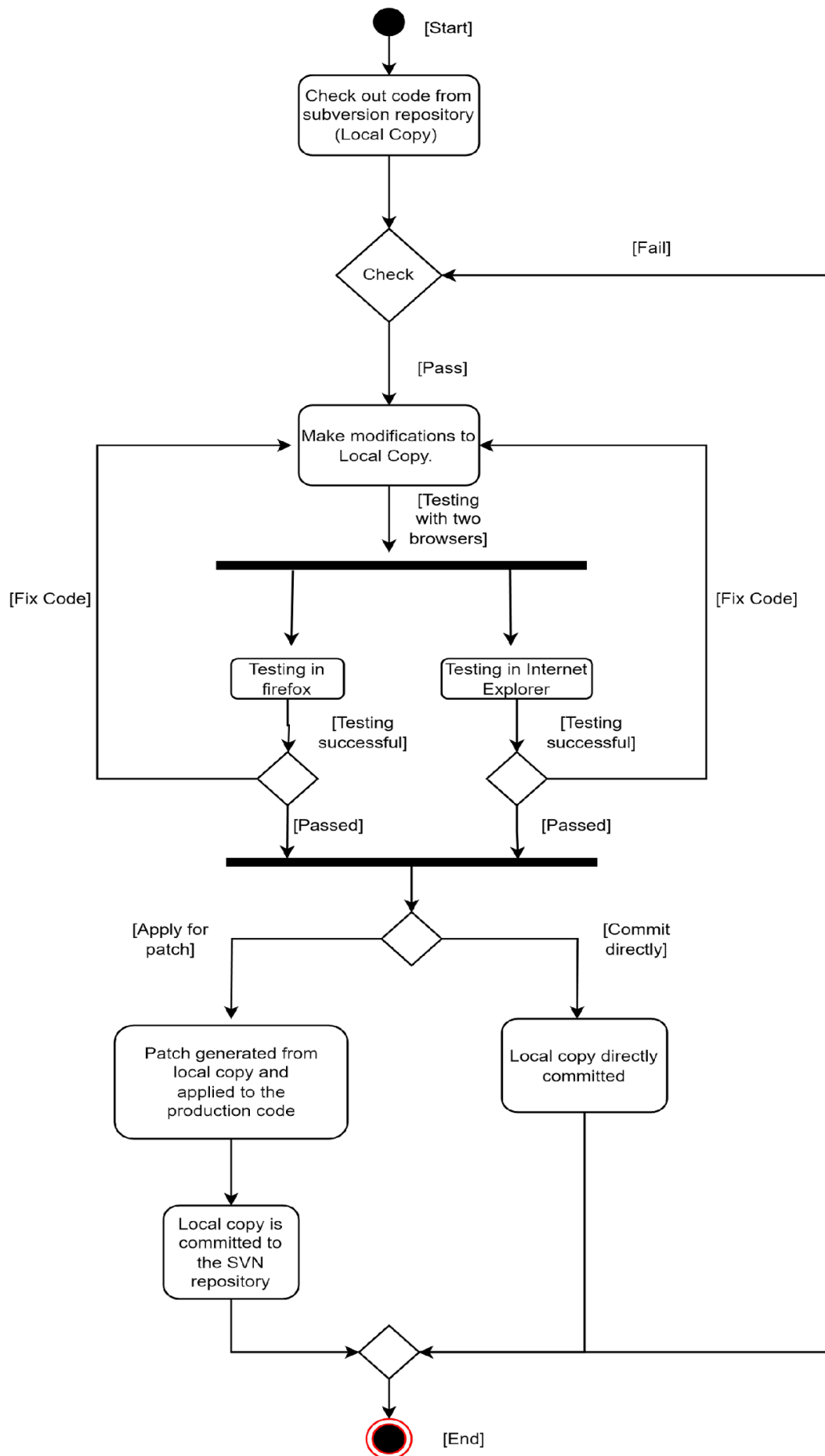
September 28, 2023

Vrishin Shah(202101094)

Exercise:

Draw an activity diagram to graphically represent the following workflow. Let us consider the development activities of SE Virtual Labs. The process begins by checking out the code from the Subversion repository. Necessary modifications are then made to the checked-out code (local copy). Once the developer is done with his changes, the application has to be tested to verify whether the new functionality is working fine. This test has to be performed with two of the more popular web browsers: Firefox and Internet Explorer, to support cross-browser accessibility. If testing fails in at least one of the two browsers, the developer returns to his code, and fixes it. Only when all the browsers pass the test, a patch is generated from the local copy, and applied to the production code. The local copy is then committed resulting in an update of the SVN repository. Note that, if the local copy is committed before generating a patch file, then local changes would get registered, and one won't be further able to generate the patch file.

Note: For further clarification, at any point of time there exists three versions of the source code: Production copy, local copy, and copy in SVN repository.



Questions:

1. **How would you represent testing of the application with multiple browsers?**

Testing of the application with multiple browsers is represented by the "Testing with Firefox" and "Test with Internet Explorer" activities, which are performed in parallel using fork and merge.

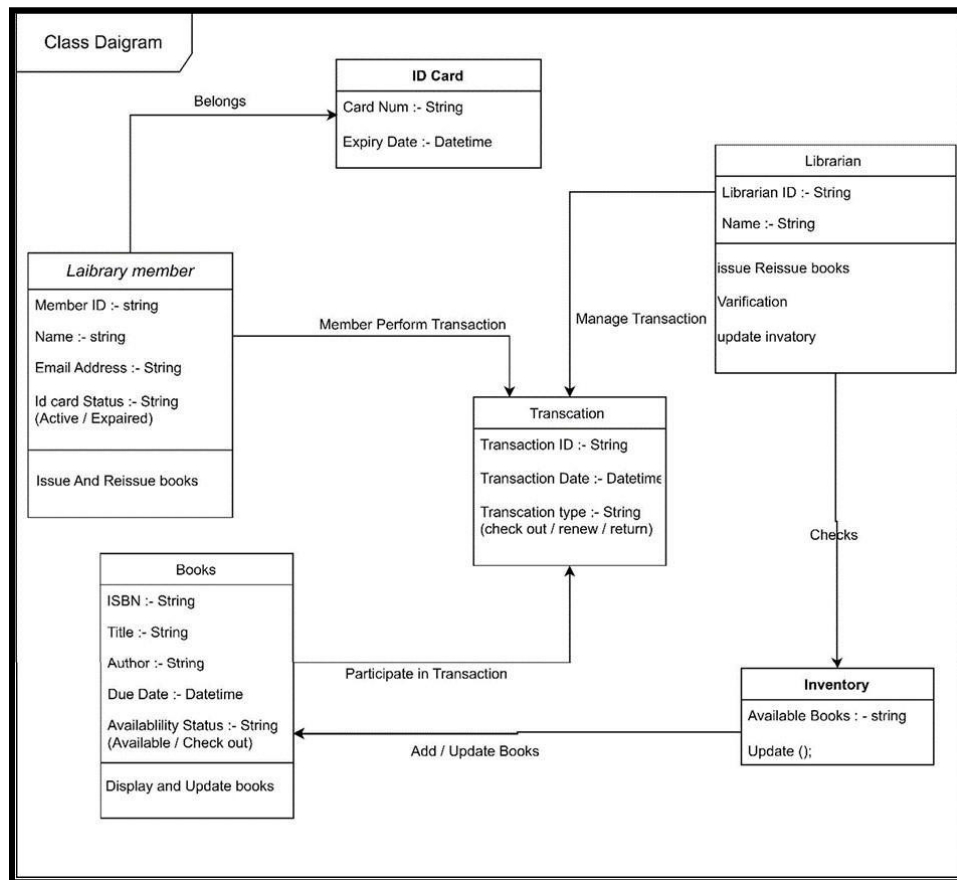
2. **Can generation of the patch file and update the Subversion repository be done concurrently?**

Generation of the patch file and updating the Subversion repository cannot be done concurrently in this workflow. The patch file must be generated before applying it to the production code, and updating the repository should happen after applying the patch.

3. **Can patching the production code and updating the Subversion repository be done in parallel?**

Patching the production code and updating the Subversion repository can be done in parallel, as they are not dependent on each other in this workflow. However, it's essential to generate the patch file first before applying it to the production code.

Que 2: Class Diagram



Classmate and their relationship :

- A library member performs transactions.
- Books: those that take part in transactions
- ID card:- Belongs to a library patron.
- Librarian: manages transactions and inventory updates
- Transaction: Monitor the history of book transactions.
- Inventory: Keep track of the books. books should be added and updated

Objects :

- Members of the Library: Members of the library who have an ID card from the past or present
- Books: all of the library's books
- Id card: all library members' cards
- A librarian is someone who works in a library.
- Transaction: All transactions performed by Library members, such as book issue and return
- Inventory: new books that can be added to the library's collection.