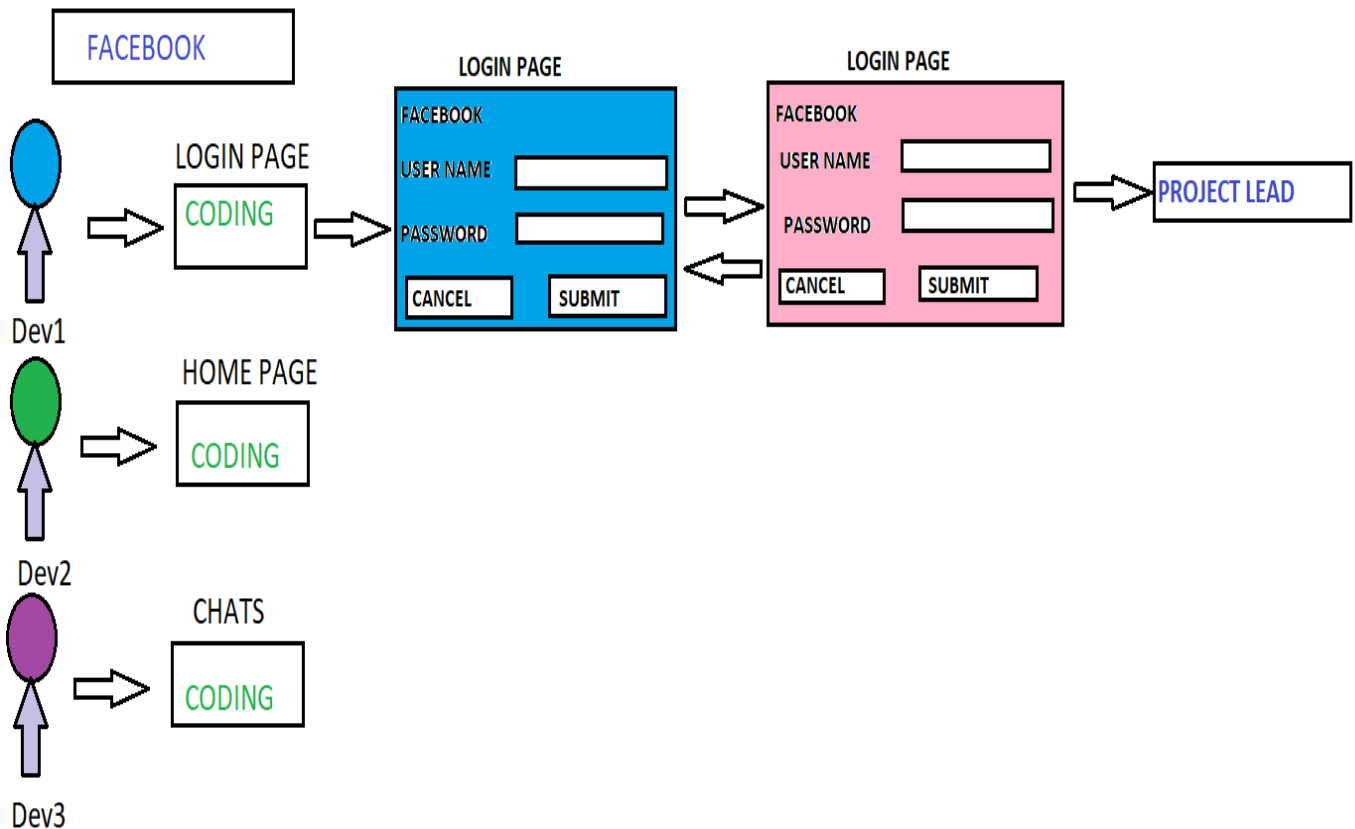


Version Control System

Before Version control system:



Drawbacks of Traditional model:

1. Developers are not saving the code in Local machine.
2. Doing modifications to the same code may generate defects.
3. Delivery of Software gets delayed.
4. Waste of Time.

What is Version Control System?

Definition:

Version Control System is a software which is used to manage all the versions of a file or set of files. It will track all the changes made to the files, so that the developers can refer the files whenever they needed. **(OR)**

Version Control system is a software that helps a team to manage changes in a source code. It will keep track of every modification to the code so that developers can compare earlier versions of the code with older versions to fix the mistakes.

Types of Version Control System [VCS]

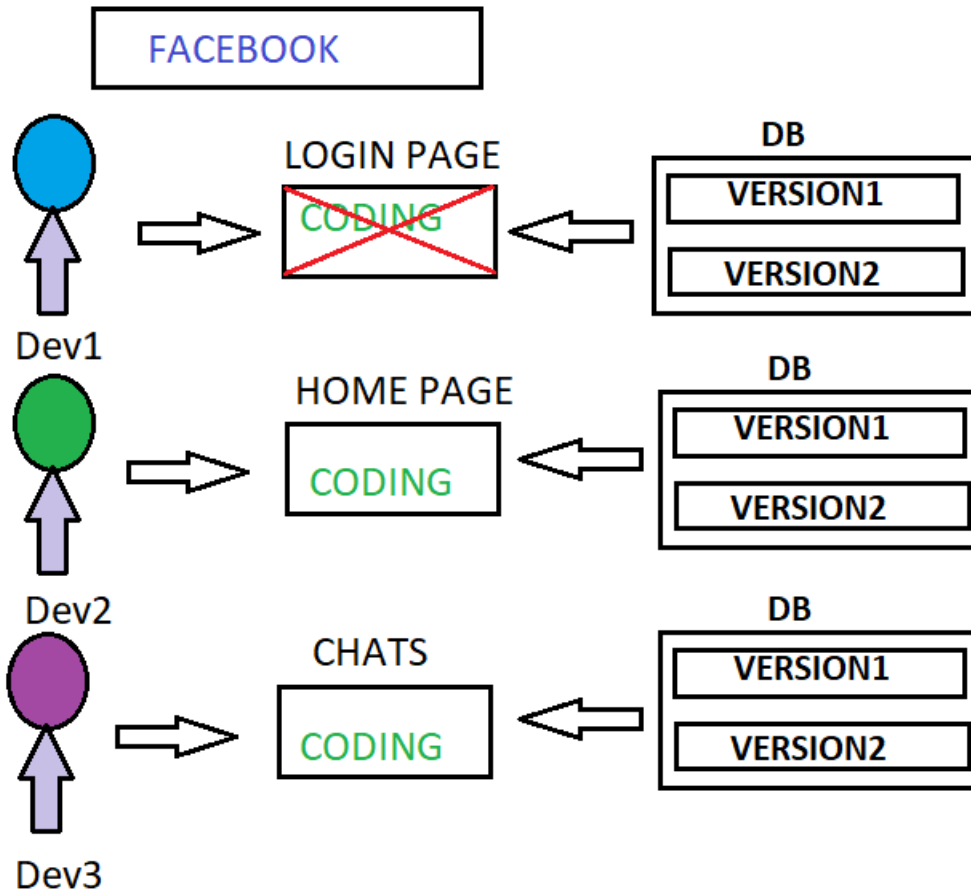
There are 3 types of version control systems, They are:

1. Local Version Control System
2. Centralized Version Control System
3. Distributed Version Control System

1.LOCAL VCS:

Using Local version control system developers will save the code/files in their local repository.

Best fit for individual users.



Advantages:

- Code will be saved to local machine so that we can refer the code whenever it is needed.
- Each and every version of code is saved so developers can do any modifications to the code but saved code will not be affected.
- Developers can able to switch back to the version of the file/ code they needed.

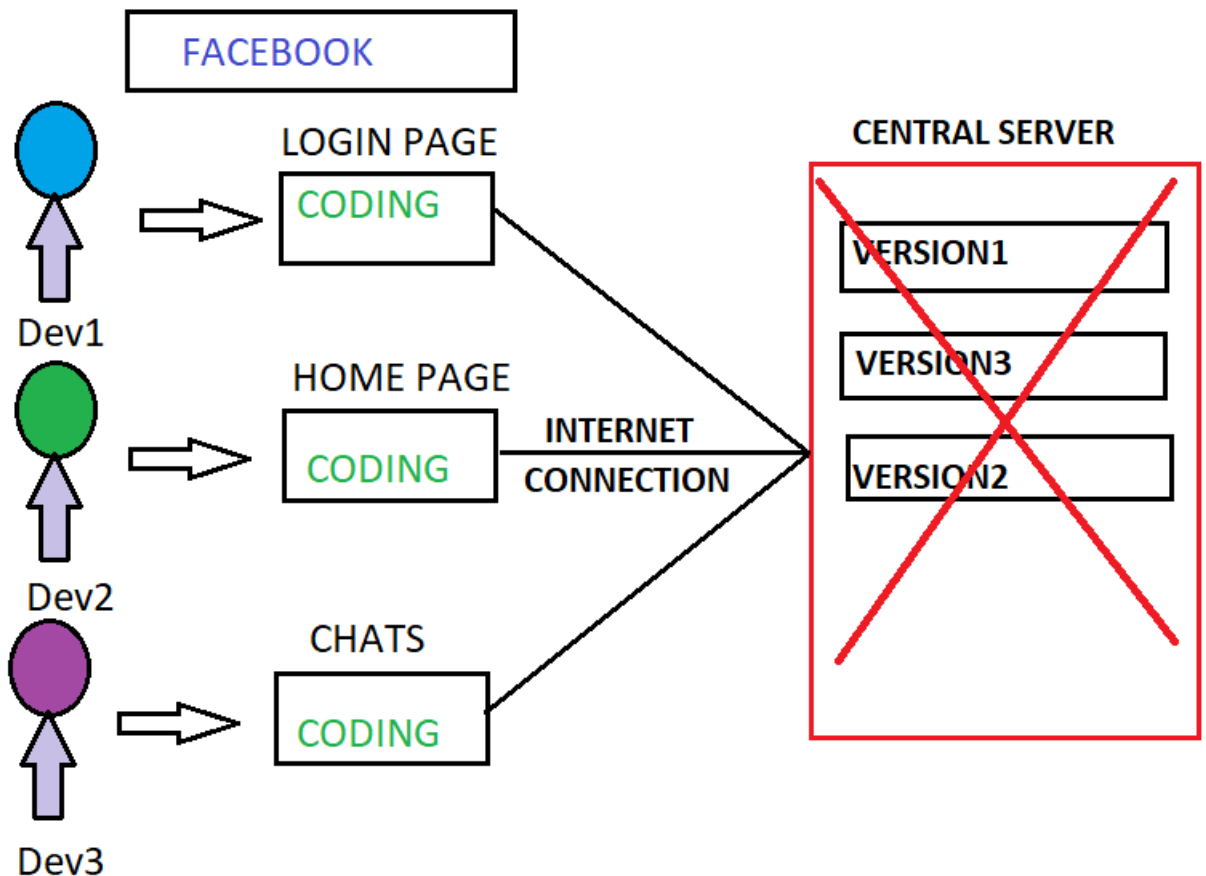
Disadvantages:

- If the Local machine fails then the developers will loss the code.
- Code Integration is not possible
- No Collaboration between the developers

2. CENTRALIZED VCS

Using the Centralized version control system developers will save the code in a centralized place called central repository where all the developers can access the code with the help of internet.

Tools: SVN[subversion], TFS[Microsoft team foundation server]



Advantages:

- All the developers can able to access the code and they can do modifications to the code.
- Code will be integrated.
- Developers will collaborate with each other.

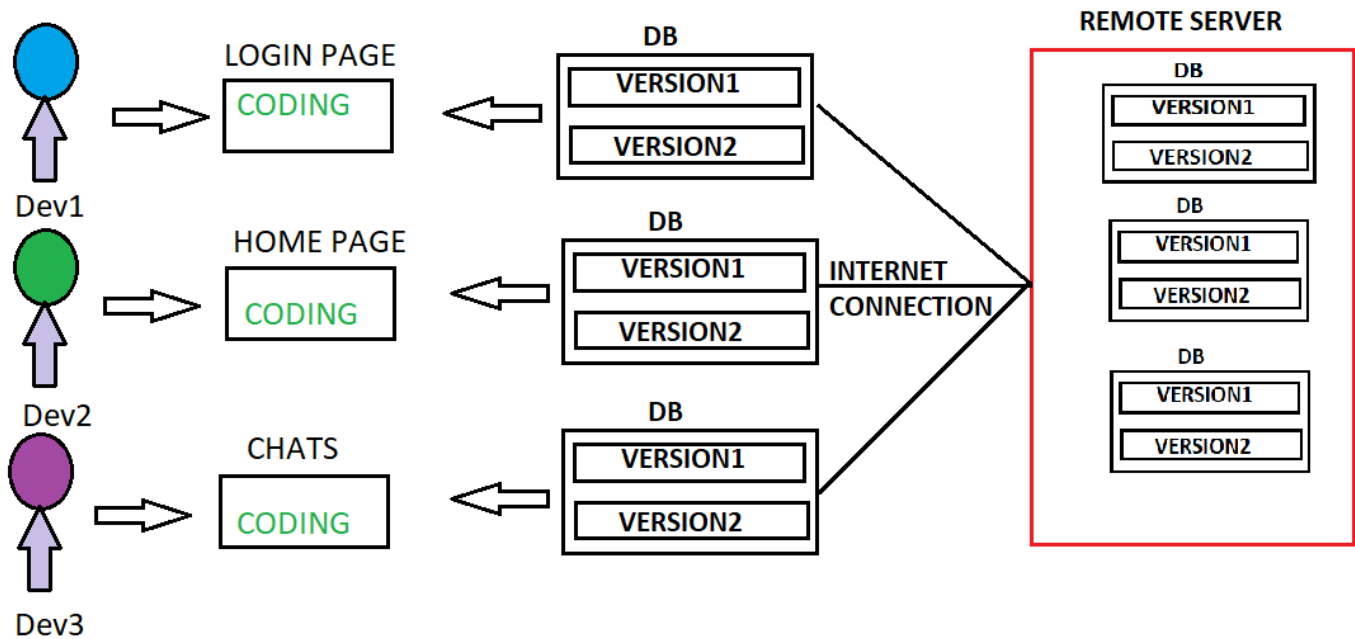
Disadvantages:

- Internet is Mandatory, so if there is no internet developers cannot able to access or send the code to the central repository.
- If Central repository fails to work then developers will loss the code present in the central repository.

3. Distributed VCS

- Using the Distributed version control system developers will save the code in the Local machine as well as in the Central repository.
- Code integration is possible.
- Collaboration between the developers is also possible.
- Internet is not mandatory all the time.

Tools: GIT, MERCURIAL, BAZAAR.



Advantages:

- Code will be present in both local and central repository so that developers can send or get the code from central repository whenever they need.
- Internet is not mandatory to save the code to local machine.
- If local or central repository fails then we can get the code from any of the other developer's local machine.

