Webonise Lab
Induction Program

Deployment Tools

GIT

What is Git?

Git is a SCM (Source Control Management System)

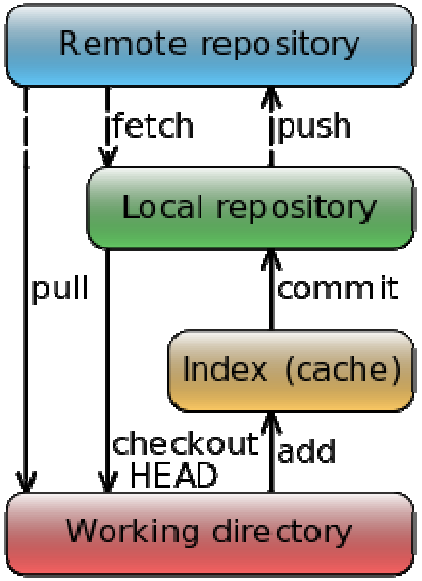
Git

- Is distributed
- Has no master copy
- Has fast merges
- Scales up
- Safeguards against corruption

GIT

Why Git

- Branching is fast and easy.
- Offline work is supported; local commits can be submitted later.
- Git commits are atomic and project-wide, not per-file as in CVS.
- Every working tree in Git contains a repository with a full project history.
- No Git repository is inherently more important than any other.



Git: Quick Start

Creating a repository

```
$ git init              //initialize git repository
$ git add .             //Adds a new file to the local repository
$ git commit        //Commit all files to the local repository
# edit the commit message, save and quit.
```

Cloning a repository

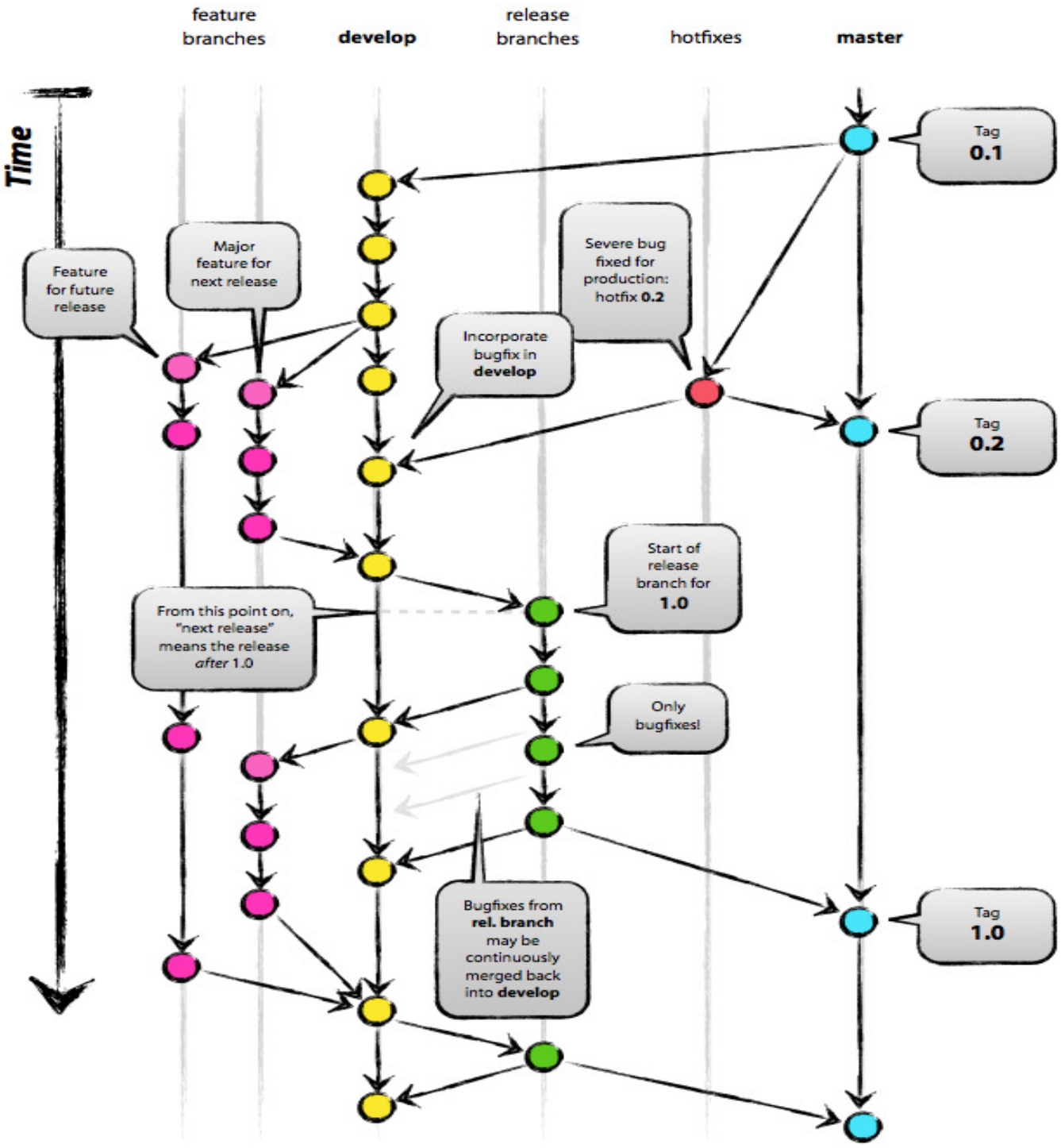
```
$ git clone git@github.com:vparihar01/gitbabu.git
```

Creating repository on github server

```
mkdir BTLV-Webo
  cd BTLV-Webo
  git init
  git commit -m 'first commit'
  git remote add origin git@github.com:btlventures/BTLV-Webo.git
  git push -u origin master   //Upload a tree to the original repository
  git pull origin master          //Download a tree from the original repository
```

GIT Branching Strategy

For successful GIT branching model we use git-flow



Server

Types of servers :

- Development
- Testing
- Staging
- Production

Capistronio

Introduction on Capistrano:

Capistrano is a developer tool for deploying web applications. It is typically installed on a workstation, and used to deploy code from your source code management (SCM) to one, or more servers.

CI (Continuous Integration)

Continuous Integration is a software development practice where members of a team integrate their work constantly. Usually, each person integrates at least once a day - leading to multiple integrations per day. Each integration is verified by an automated build (including test) to detect integration errors as quickly as possible.

Continuous integration has many advantages:

- When unit tests fail or a bugs emerge, developers might revert the codebase to a bug-free state, without wasting time on debugging.
- You locate build breaks early.
- Prior warning of broken/incompatible code.
- Prior warning of conflicting changes.
- Immediate unit testing of all changes.
- Constant availability of a "current" build for testing, demo, or release purposes.
- Immediate feedback to developers on the quality, functionality, or system-wide impact of code they are writing.
- Frequent code check-in forces developers to create modular, less complex code.

Cruise Control

In software development, CruiseControl.rb is a Ruby-based framework for a continuous build process. It allows one to perform continuous integration of a codebase in any language and on any platform.

CruiseControl.rb is a free, open-source software, distributed under the Apache 2.0 license. It was originally created by employees of ThoughtWorks as a lightweight continuous integration framework that would be easier to install, use and extend than open source alternatives that existed at that point in time.

Assignment

Assignment -: git repository and branch creation + deletion + merging

References -:
1. http://jonas.iki.fi/git_guides/HTML/git_guide/
2.

Thank You