**GIT Branch Instructions**

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**Preconditions:**

Remote Master Branch exists (origin/master)

Master Branch is present on local machine (user has already cloned origin/master to local machine)

Sprint Branch has been created and exists locally

**Git Workflow**

1. Switch to the Sprint Branch and update it.
2. Create a Work Branch off of the current Sprint Branch and name it according to the naming convention.
3. Perform work on the Work Branch to fulfill the JIRA card.
4. Switch to the current Sprint Branch.
5. Update the current Sprint Branch prior to merge.
6. Merge the Work Branch into the local current Sprint Branch
7. Test
8. Push the merged Sprint Branch to remote repository.

**Create a Work Branch for a JIRA card number**

* Create a local branch off of the current Sprint Branch
  + Move to Sprint Branch
    - git checkout <sprint\_branch>
    - Example: *git checkout sprint2*
    - *git pull origin <sprint\_branch>*
    - Example: git *pull origin sprint2*
  + work\_branch should be of the form sprint#\_jiraName-card#\_a-few-words
    - Example: git push origin sprint2\_BPP-22\_make-landing-page
    - Jira card number should be exactly the same as in jira, including case.
  + *git checkout -b work\_branch*   
    (note: This command creates a new local branch called work\_branch and checks it out for you. Work branch is a copy of the branch that you have checked out.)
  + branching locally will create a remote branch only when you push the local branch to the remote location
* Push to Remote
  + git push <remote-name> <branch-name>
    - Example: *git push origin work\_branch*
* Check that the branch made it to the server
  + Display all branches
    - *git branch -a*
    - remotes/origin/<branch-name> should be displayed in red
      * Example: remotes/origin/sprint2\_BPP-22\_make-landing-page would be displayed

**Merge Work Branch with Sprint Branch**

* Make sure the Work Branch is synced with remote
  + git checkout <work\_branch>
  + Example *git checkout sprint2\_BPP-22\_make-landing-page*
  + *git pull origin <work\_branch>*
* Switch to current Sprint Branch
  + git checkout <sprint\_branch>
  + Example: *git checkout sprint2*
* Update Sprint Branch
  + *git pull origin <sprint\_branch>*
* Merge Work Branch with Sprint Branch
  + git merge <work\_branch>
  + Example: git merge sprint2\_BPP-22\_make-landing-page
* Resolve Conflicts
  + Good luck on this!
* Check for functionality
  + Build the project and test locally
  + Run unit tests
  + Check anything else that comes to mind
* Push Current Sprint to remote
  + *git push origin <sprint\_branch>*
* Run additional test to make sure nothing broke
  + Generate WAR file and reload to Apache Tomcat
  + Request to QA to Run Selenium and JMeter tests from the bookstest project

