# Bitbucket & Sourcetree

Version Control in Westpac

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# Environment Setup

1. Access to Bitbucket

2. Install Sourcetree client

3. Set up SSH key

4. Create a repository for your team
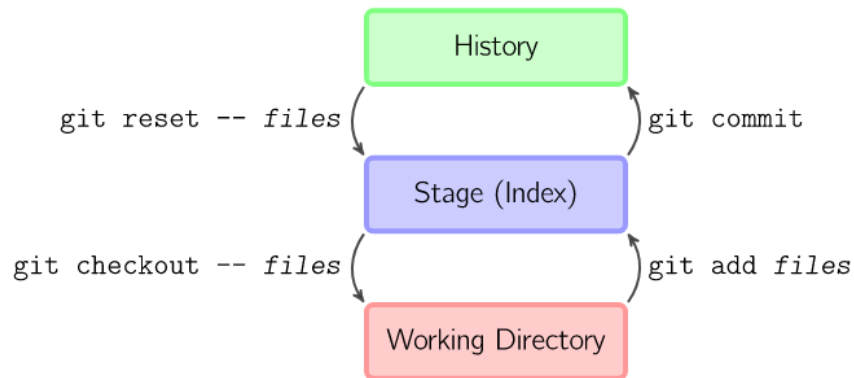
5. Create a Jira board for your project

# Intro to Git

Basic Concept

Working Directory (*What you see in your editor*)

Staging area (Index)

Local Repository

Remote Repository (Bitbucket etc)



```
                                    ┌─────────────┐
                                    │   History   │
                                    └─────────────┘
      git reset -- files  (                         )  git commit
                                    ┌─────────────┐
                                    │ Stage (Index)│
                                    └─────────────┘
      git checkout -- files (                       )  git add files
                                    ┌─────────────────┐
                                    │ Working Directory│
                                    └─────────────────┘
```

# Intro to Git

Sourcetree Interface

Bookmark Windows: Switch between projects, repositories

Toolbar: basic operations

Sidebar: file status, search bar

Viewing histories & diffs

# Intro to Git

Bitbucket Interface

Repositories

Branches

Pull Requests

Issues

Account Setting

Manage Repositories (Repo permission, Branch permission)

# Basic Operations

How to save and publish your changes

Stage files (= git add): save files to staging area/Index

Commit (= git commit): save changes to your local repo

- Integration with Jira

- How to write meaningful commit message?

Push: Publish your local changes to remote repo

Pull: Apply the latest changes from remote repo to your local repo

# Basic Operations

Undo Changes

**git checkout**

> Set HEAD to the specific commit state and create a "detached HEAD" mode

**git revert**

> create new commit message and revert the previous state

**git reset**

> remove the previous commit at all

**undo unsaved changes**

> discard hunk

# Basic Operations

rewrite histories

Change the last commit message

- git commit -amend

Combine multiple commit messages into one

- git squash
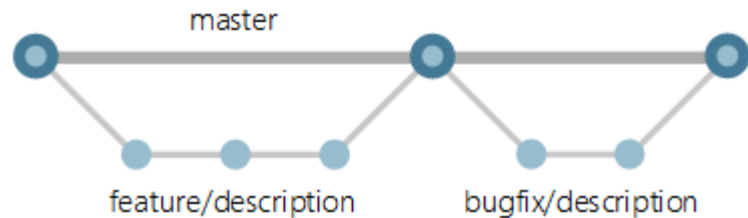- interactive rebase

# Collaboration

Feature branch workflow

What is Feature Branch Workflow?

How to create branch

Branch naming convention

- master
- dev
- feature/XXX
- hotfix/XXX
- release/X.X

# Collaboration

Merge & Pull Request

"pull requests" are a mechanism for a developer to notify team members that they have completed a feature.

Create Pull Request in Bitbucket

How to resolve Merge Conflict?

# Reference

1. [Make a pull request](#)

2. [Sourcetree get started](#)

3. [Bitbucket Interface](#)

4. [How to undo things in Git?](#)