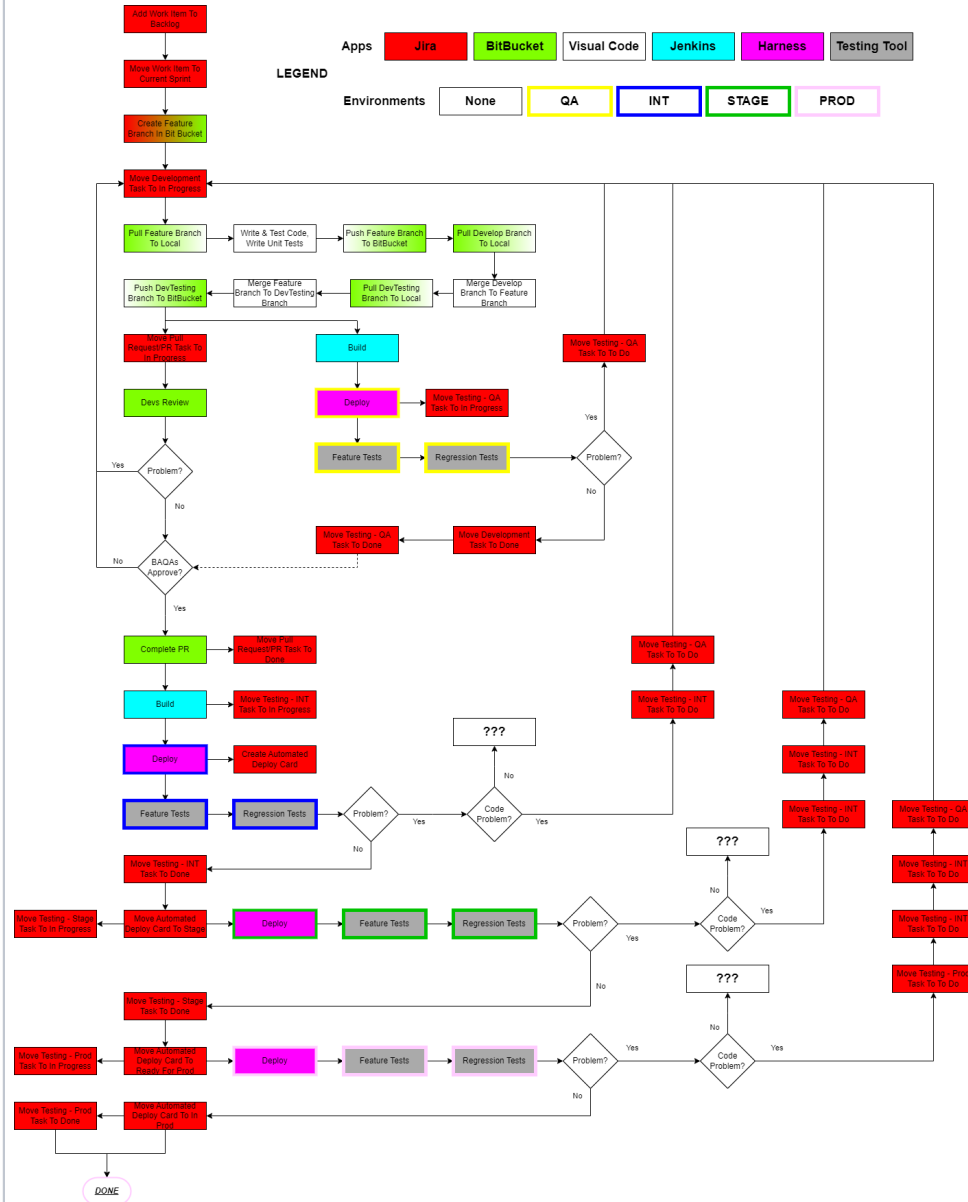# Work Flow

1. Add a Work Item to the backlog in Jira
2. Move a Work Item to the current sprint in Jira
3. Create a Work Item Feature Branch in the Remote Bit Bucket using Jira
4. Copy (Pull) a Remote Bit Bucket Feature Branch to a Local Feature Branch
5. Move a Development Task in a Work Item to the In Progress column in Jira
6. Implement Code with Visual Code for a Work Item in a Local Feature Branch
7. Test Code with Visual Code for a Work Item in a Local Feature Branch
8. Write Unit Test Code for a Work Item in a Local Feature Branch
9. Copy (Push) Code for a Work Item in a Local Feature Branch to a Remote Bit Bucket Feature Branch
10. IN PARALLEL
    a. Work Flow 1
        i. Copy (Pull) Remote Bit Bucket Develop Branch to Local Develop Branch
        ii. Merge Local Develop Branch to Local Feature Branch
        iii. Copy (Pull) Remote Bit Bucket DevTesting Branch to Local DevTesting Branch
        iv. Merge Local Feature Branch to Local DevTesting Branch
        v. Copy (Push) Local DevTesting Branch to Remote Bit Bucket DevTesting Branch

Legend

Apps: Jira, BitBucket, Visual Code, Jenkins, Harness, Testing Tool

Environments: None, QA, INT, STAGE, PROD

Flowchart

Add Work Item To Backlog → Move Work Item To Current Sprint → Create Feature Branch In Bit Bucket → Move Development Task To In Progress → Pull Feature Branch To Local → Write & Test Code, Write Unit Tests → Push Feature Branch To BitBucket → Pull Develop Branch To Local → Merge Develop Branch To Feature Branch → Pull DevTesting Branch To Local → Merge Feature Branch To DevTesting Branch → Push DevTesting Branch To BitBucket → Move Pull Request/PR Task To In Progress → Devs Review → Problem?

Build → Deploy → Feature Tests → Regression Tests → Problem?

Move Testing - QA Task To To Do
Move Testing - QA Task To In Progress
Move Testing - QA Task To Done
Move Development Task To Done

BAQAs Approve? → Complete PR → Build → Deploy → Feature Tests → Regression Tests → Problem? → Code Problem? → ???

Move Pull Request/PR Task To Done
Move Testing - INT Task To In Progress
Create Automated Deploy Card
Move Testing - INT Task To Done

Move Testing - Stage Task To In Progress → Move Automated Deploy Card To Stage → Deploy → Feature Tests → Regression Tests → Problem? → Code Problem? → ???

Move Testing - Stage Task To Done
Move Testing - Prod Task To In Progress → Move Automated Deploy Card To Ready For Prod → Deploy → Feature Tests → Regression Tests → Problem? → Code Problem? → ???

Move Testing - Prod Task To Done → Move Automated Deploy Card To In Prod → DONE

Move Testing - QA Task To To Do
Move Testing - INT Task To To Do
Move Testing - QA Task To To Do
Move Testing - INT Task To To Do
Move Testing - QA Task To To Do
Move Testing - INT Task To To Do
Move Testing - Prod Task To To Do

vi. Move a Development Task in a Work Item to the Done column in Jira

vii. Automated CI/CD Pipeline 1 Engaged

1. Jenkins Builds (Continuous Integration /CI) Remote Bit Bucket DevTesting Branch, which includes

   a. Black formatting checks

   b. Unit tests run

   c. SonarQube checks

d. if there is a problem with 10.a.iv.1.a, 10.a.iv.1.b, or 10.a.iv.1.c, go to 6

e. if there is some other problem, talk to DevOps teammates in Quantiphi Spaghetti - DevOps & Docs AI teams chat

2. Harness Deploys (Continuous Deployment/CD) Remote Bit Bucket DevTesting Branch to QA Environment (a.k.a., "Dev")

viii. Move a Testing - QA Task in a Work Item to the In Progress column in Jira

ix. Test in QA Environment
1. Perform Work Item Specific Tests
2. Perform Regression Tests
3. if there is a problem, go to 5
4. if there isn't a problem
   a. Move a Testing - QA Task in a Work Item to the Done column in Jira
   b. see 10.b.iv

b. Work Flow 2

i. Move a Pull Request /PR Task in a Work Item to the In Progress column in Jira
ii. Create Pull Request (PR) to merge Remote Bit Bucket Feature Branch to Remote Bit Bucket Develop Branch
    1. Per BK w/ example in Bit Bucket, there is a Jenkins Build of the PR
    2. Per Bill Reynolds, there is no CI/CD pipeline that exists to support BK's Bit Bucket example
iii. Other Devs Review Code
    1. if there is a problem, go to 5
iv. BAQAs Approve (see 10.a.ix.4)

v. Complete Pull Request, i.e., merge Remote Bit Bucket Feature Branch to Remote Bit Bucket Develop Branch
    1. This deletes the Remote Bit Bucket Feature Branch
vi. Move a Pull Request /PR Task in a Work Item to the Done column in Jira
vii. Automated CI/CD Pipeline 3 Engaged
    1. Jenkins Builds (Continuous Integration /CI) Remote Bit Bucket Develop Branch

2. Harness Deploys (Continuous Deployment /CD) Remote Bit Bucket Develop Branch to INT Environment

   a. Harness creates an Automated Deploy Kanban Board deploy card in the In Integration column

viii. Move a Testing - Integration Task in a Work Item to the In Progress column in Jira

ix. Test in INT Environment

1. Perform Work Item Specific Tests
2. Perform Regression Tests
3. if there is a problem
   a. if the problem is code related, go to 5
   b. if the problem is not code related, ???

x. Move a Testing - Integration Task in a Work Item to the Done column in Jira

xi. Move an Automated Deploy Kanban Board deploy card to the In Stage column
     1. This Promotes to STAGE Environment
xii. Move a Testing - Stage Task in a Work Item to the In Progress column in Jira

xiii. Test in STAGE Environment
1. Perform Work Item Specific Tests
2. Perform Regression Tests
3. if there is a problem
    a. if the problem is code related, go to 5
    b. if the problem is not code related, ???
xiv. Move a Testing - Stage Task in a Work Item to the Done column in Jira

xv. Move an Automated Deploy Kanban Board deploy card to the Ready For Production column
  1. This Promotes to PROD Environment
xvi. Move a Testing - Production Task in a Work Item to the In Progress column in Jira
xvii. Test in PROD Environment
  1. Perform Work Item Specific Tests
  2. Perform Regression Tests
  3. if there is a problem

a. if the problem is code related, go to 1, but as a HotFix with a new Branch & possibly Jira WorkItem
b. if the problem is not code related, ???

xviii. Move a Testing - Production Task in a Work Item to the Done column in Jira

xix. Move an Automated Deploy Kanban Board deploy card to the In Production column