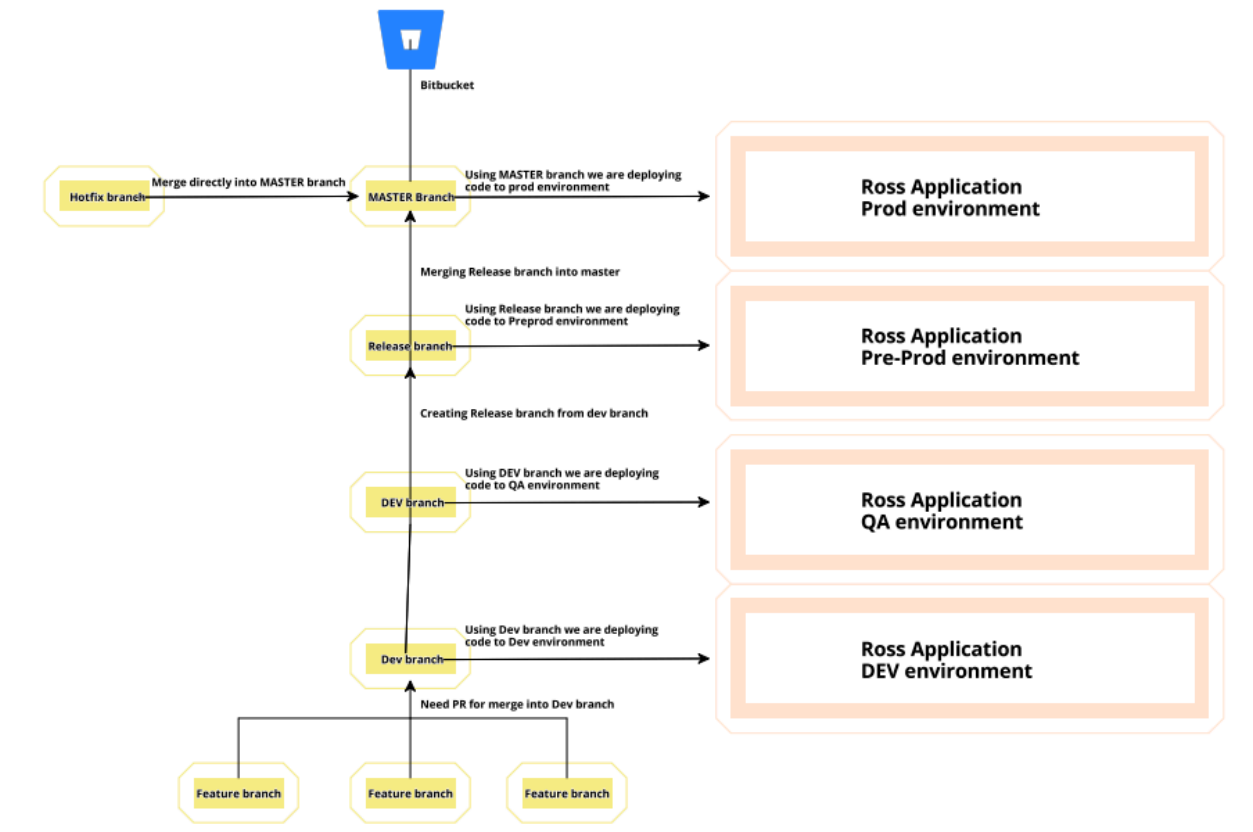


# Branching Strategy for ROSS Application



## Branch Types

### Main Branch

- **Purpose:** Production deployment
- **Naming Convention:** `main` or `master`
- **Deployment:** Manually triggered as per production deployment schedule
- **Approval:** Requires approver's approval for deployment to production

### Environment-Specific Branches

- **Release Branch**
  - **Purpose:** Pre-production deployment
  - **Naming Convention:** `release/{version}`

- **Deployment:** Automatically triggers pre-prod deployment pipeline
- **Dev Branch**
  - **Purpose:** Development and QA
  - **Naming Convention:** `dev`
  - **Deployment:** Automatically triggers Dev and QA environment pipelines

## Hotfix and Bugfix Branches

- **Hotfix Branch**
  - **Purpose:** Fix critical issues in production
  - **Naming Convention:** `hotfix/{issue-id}`
  - **Deployment:** Merges back into `main` and `dev` branches after fixes
- **Bugfix Branch**
  - **Purpose:** Fix bugs found during QA
  - **Naming Convention:** `bugfix/{issue-id}`
  - **Deployment:** Merges back into `dev` branch after fixes

## Workflow

- 1. Feature Development**
  - Developers create feature branches from the `dev` branch.
  - Naming Convention: `feature/{story-id}`
  - Once development is complete, a pull request (PR) is created to merge the feature branch into the `dev` branch.
  - PR approval and passing tests (Snyk and SonarCloud) are required before merging.
- 2. Development Environment Deployment**
  - After merging a feature branch into the `dev` branch, the Dev environment pipeline is triggered automatically.
  - Deployment occurs in the Dev environment for initial testing by developers.
- 3. QA Environment Deployment**
  - After successful Dev testing, the pipeline approval triggers deployment to the QA environment.
  - QA tests the changes; if issues are found, a `bugfix` branch is created from the `dev` branch.
  - Fixes are merged back into the `dev` branch, and the cycle repeats until QA approval.
- 4. Pre-Production Deployment**
  - Once QA approves, a `release` branch is created from the `dev` branch.
  - The release branch is deployed to the pre-prod environment.
- 5. Production Deployment**

- After successful pre-prod testing, the **release** branch is merged into the **main** branch.
- The production pipeline is manually triggered according to the deployment schedule.
- An additional approval layer ensures no deployment without approver's consent.

#### 6. **Hotfix Deployment**

- For critical issues in production, a **hotfix** branch is created from the **main** branch.
- Fixes are applied and merged back into both the **main** and **dev** branches.