

Ex. No. 3	Git & BitBucket
07/08/2024	

AIM

Algorithm for Implementing Bitbucket Operations using Git

Algorithm

1. Creating a Repository:

- Log into your Bitbucket account.
- Click on the **Repositories** tab in the sidebar.
- Click on the **Create repository** button.
- Fill in the repository details and set the access level.
- Click on the **Create repository** button.

2. Cloning a Repository:

- Copy the repository URL from Bitbucket.
- Open the terminal.
- Clone the repository using the URL.

3. Making Changes and Creating a Branch:

- Navigate into the cloned repository.
- Create a new text file named **test.txt**.
- Add content to the **test.txt** file.
- Check the repository status.
- Stage the changes for commit.
- Commit the changes with a message.
- Create a new branch named **feature**.
- Switch to the **feature** branch.

4. Pushing Changes to Bitbucket:

- Add the repository URL to a variable.
- Push the **feature** branch to Bitbucket.
- Confirm the new branch is available in the Bitbucket repository.

5. Collaborating through Pull Requests:

- Go to the repository on Bitbucket.
- Click on **Create pull request**.
- Choose the source branch (**feature**) and the target branch (**main**).
- Review the changes and create the pull request.
- Review and merge the pull request.

6. Syncing Changes:

- After merging, update the local repository with the latest changes from the remote repository.

Input

```
# Task 1: Creating a Repository
# 1. Log into your Bitbucket account.
# 2. Click on the `Repositories` tab in the sidebar.
# 3. Click on the `Create repository` button.
# 4. Fill in the repository details:
#   - Repository name: `example-repo`
#   - Access level: Choose between Private or Public.
# 5. Click on the `Create repository` button.

# Task 2: Cloning a Repository
# 1. Copy the repository URL.
# 2. Open terminal.
git clone https://nakshathragreeneem@bitbucket.org/devops-example-72/devops-ex3.git

# Task 3: Making Changes and Creating a Branch
cd devops-ex3
echo "This is a test file." > test.txt
git status
git add test.txt
git commit -m "Edited test.txt"
git branch feature
git checkout feature

# Task 4: Pushing Changes to Bitbucket
git push -u origin feature

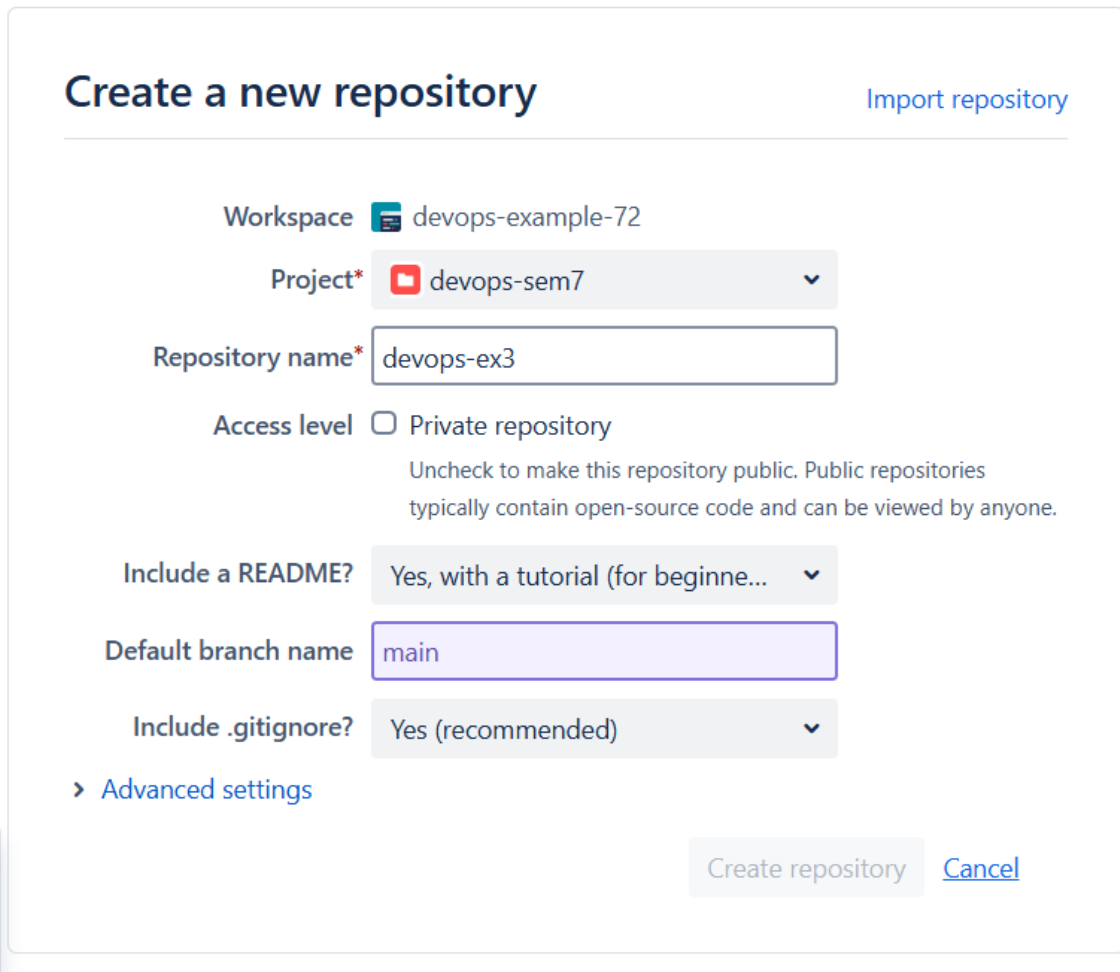
# Task 5: Collaborating through Pull Requests
# 1. Go to the Bitbucket repository.
# 2. Click on `Create pull request`.
# 3. Choose the source branch (`feature`) and the target branch (`main`).
# 4. Review the changes and create the pull request.
# 5. Add a title and description for the pull request.
# 6. Assign reviewers if needed.
# 7. Once the pull request is approved, merge it into the target branch.

# Task 6: Syncing Changes
git checkout main
git pull origin main
```

Output

1. Creating a Repository:

- A new Bitbucket repository named **devops-ex3** is created with the specified details.



The screenshot shows the Bitbucket 'Create a new repository' interface. At the top, there's a title 'Create a new repository' and a link 'Import repository'. Below this, the 'Workspace' is set to 'devops-example-72'. The 'Project*' is a dropdown menu showing 'devops-sem7'. The 'Repository name*' is a text input field containing 'devops-ex3'. The 'Access level' section has an unchecked checkbox for 'Private repository' and a note: 'Uncheck to make this repository public. Public repositories typically contain open-source code and can be viewed by anyone.' The 'Include a README?' dropdown is set to 'Yes, with a tutorial (for beginne...'. The 'Default branch name' is a text input field containing 'main'. The 'Include .gitignore?' dropdown is set to 'Yes (recommended)'. At the bottom left, there's a link '> Advanced settings'. At the bottom right, there are two buttons: 'Create repository' and 'Cancel'.

2. Cloning a Repository:

- The repository is successfully cloned to the local machine.

```
C:\Users\naksh\Downloads>cd DevOpsCode

C:\Users\naksh\Downloads\DevOpsCode>git clone https://nakshathragreeneem@bitbucket.org/devops-example-72/devops-ex3.git
Cloning into 'devops-ex3'...
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (4/4), 1.73 KiB | 1.73 MiB/s, done.

C:\Users\naksh\Downloads\DevOpsCode>cd devops-ex3

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>
```

3. Making Changes and Creating a Branch:

- Navigated into the cloned repository.
- **test.txt** file created and modified.
- Changes staged and committed.

- New branch **feature** created and switched to.

```
C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>git branch
* main

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>echo "This is a test file." > test.txt

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>ls
'ls' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>dir
Volume in drive C is Windows-SSD
Volume Serial Number is 101D-CF9E

Directory of C:\Users\naksh\Downloads\DevOpsCode\devops-ex3

20-11-2024  18:32    <DIR>          .
20-11-2024  18:27    <DIR>          ..
20-11-2024  18:27                674 .gitignore
20-11-2024  18:27                2,666 README.md
20-11-2024  18:32                25 test.txt
               3 File(s)                3,365 bytes
               2 Dir(s)  140,980,707,328 bytes free

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
       test.txt

nothing added to commit but untracked files present (use "git add" to track)

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>git add test.txt

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>git commit -m "Edited test.tx
t"
[main 214dd99] Edited test.txt
 1 file changed, 1 insertion(+)
 create mode 100644 test.txt

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>git branch feature

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>git checkout feature
Switched to branch 'feature'

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>git push -u origin feature
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 342 bytes | 342.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create pull request for feature:
remote:   https://bitbucket.org/devops-example-72/devops-ex3/pull-requests/n
ew?source=feature&t=1
remote:
To https://bitbucket.org/devops-example-72/devops-ex3.git
 * [new branch]      feature -> feature
branch 'feature' set up to track 'origin/feature'.
```

4. Pushing Changes to Bitbucket:

- **feature** branch pushed to Bitbucket.
- Verified the new branch **feature** is available in the Bitbucket repository.

5. Collaborating through Pull Requests:

- Pull request created, reviewed, and merged on Bitbucket.

devops-example-72 / devops-sem7 / devops-ex3 / Pull Requests

Create a Pull Request

Source Branch

feature

→

Destination Branch

main

Title *

Edited test.txt

Description

Normal text

B *I* ...

Reviewers

Add reviewers

Delete branch

☐ Delete 'feature' after the pull request is merged

Create pull request

1 commit

Author	Commit	Message	Date
Nakshathra	214dd99	Edited test.txt	3 minutes ago

Files 1

Lines updated +1

test.txt +1

devops-example-72 / devops-sem7 / devops-ex3 / Pull requests

Edited test.txt

feature → main MERGED

#1 • Created 42 seconds ago • Last updated 21 seconds ago

Overview

Files changed 1

Commits 2

Merged pull request

Merged in feature (pull request #1)

1c39406 • Author: Nakshathra • Closed by: Nakshathra • 24 seconds ago

Description

0 attachments

There aren't any attachments. [Browse to upload](#)

Activity

All activity

What do you want to say?

TODAY

Nakshathra MERGED the pull request 15 seconds ago

Nakshathra OPENED the pull request 35 seconds ago

6. Syncing Changes:

- Local repository updated with the latest changes from the remote repository.

```
C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>git pull origin main
remote: Enumerating objects: 1, done.
remote: Counting objects: 100% (1/1), done.
remote: Total 1 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (1/1), 230 bytes | 57.00 KiB/s, done.
From https://bitbucket.org/devops-example-72/devops-ex3
 * branch                main          -> FETCH_HEAD
    7474f79..1c39406      main          -> origin/main
Updating 214dd99..1c39406
Fast-forward

C:\Users\naksh\Downloads\DevOpsCode\devops-ex3>|
```