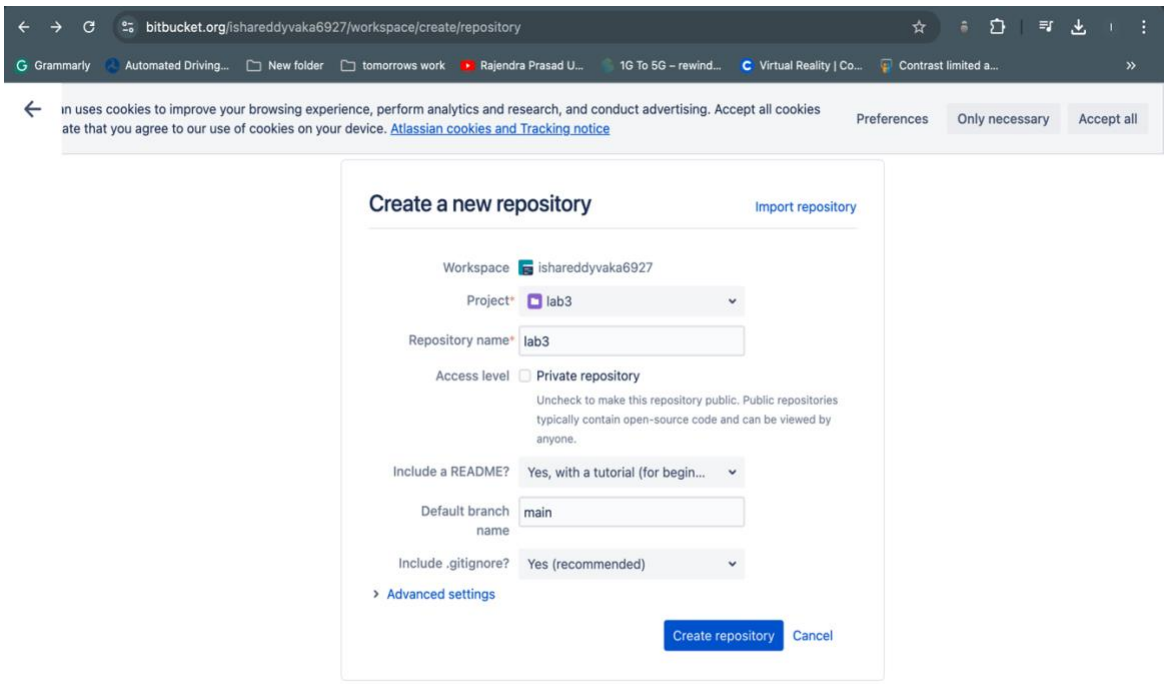
Ex. No: 3	Bitbucket Operations using Git
06.08.2024	

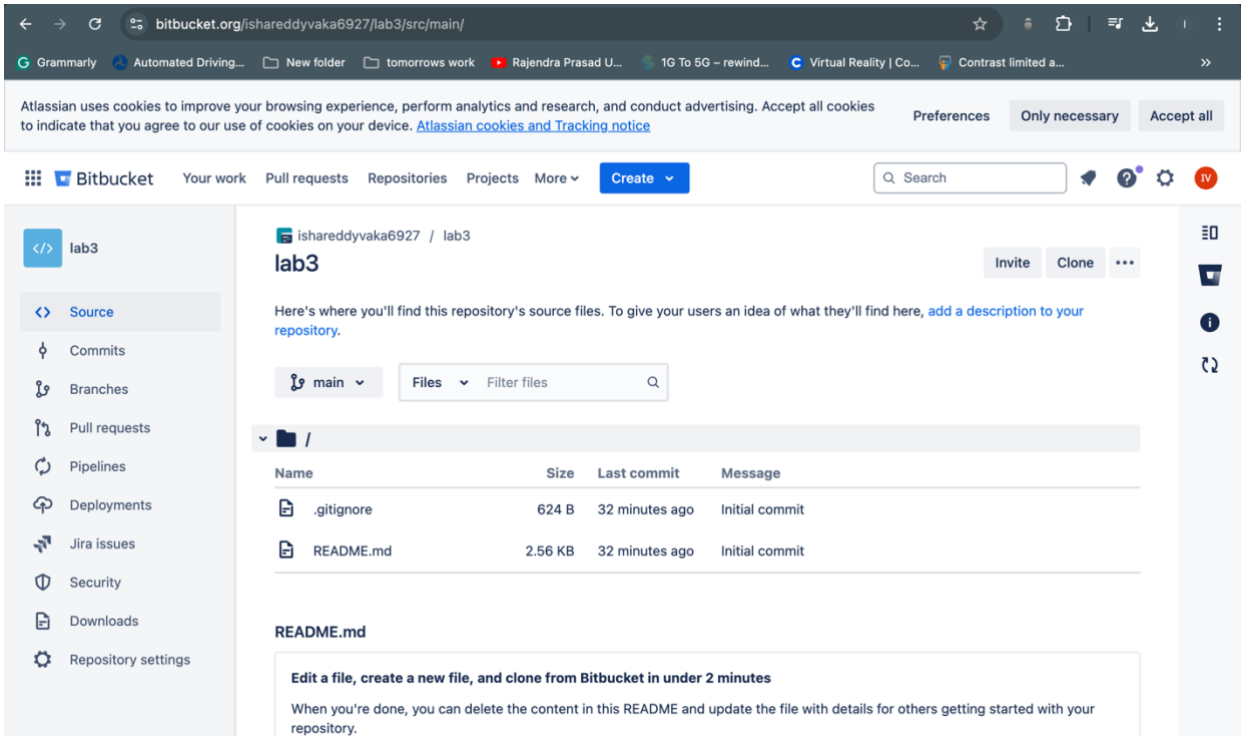
Aim:

To practice fundamental Git operations using Bitbucket, including repository creation, cloning, making changes, branching, pushing changes, collaborating through merge requests, and syncing changes.

Procedure:

1. Create a Repository





2. Cloning a Repository
    a. Use **git clone <repository_url>** with the URL you copied from Bitbucket

```
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % git clone https://ishareddyvaka@bitbucket.org/ishareddyvaka6927/lab3.git
Cloning into 'lab3'...
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), done.
```

3. Making Changes and Creating a Branch
    a. Navigate into the cloned repository

```
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % cd lab3
```

    b. Create a new text file named "filename.txt" using a text editor.
    c. Add some content to the " filename.txt" file.
    d. Save the file and return to the command line.
    e. Check the status of the repository

```
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % nano filename.txt
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % 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)
        filename.txt
```

    f. Stage the changes for commit
    g. Commit the changes with a descriptive message "Edited_example.txt"

```
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % git add .
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % git commit -m "Edited_example.txt"
[main 60ede15] Edited_example.txt
 Committer: Isha reddy Vaka <ishareddyvaka@Ishas-MacBook-Air.local>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 1 file changed, 1 insertion(+)
 create mode 100644 filename.txt
```

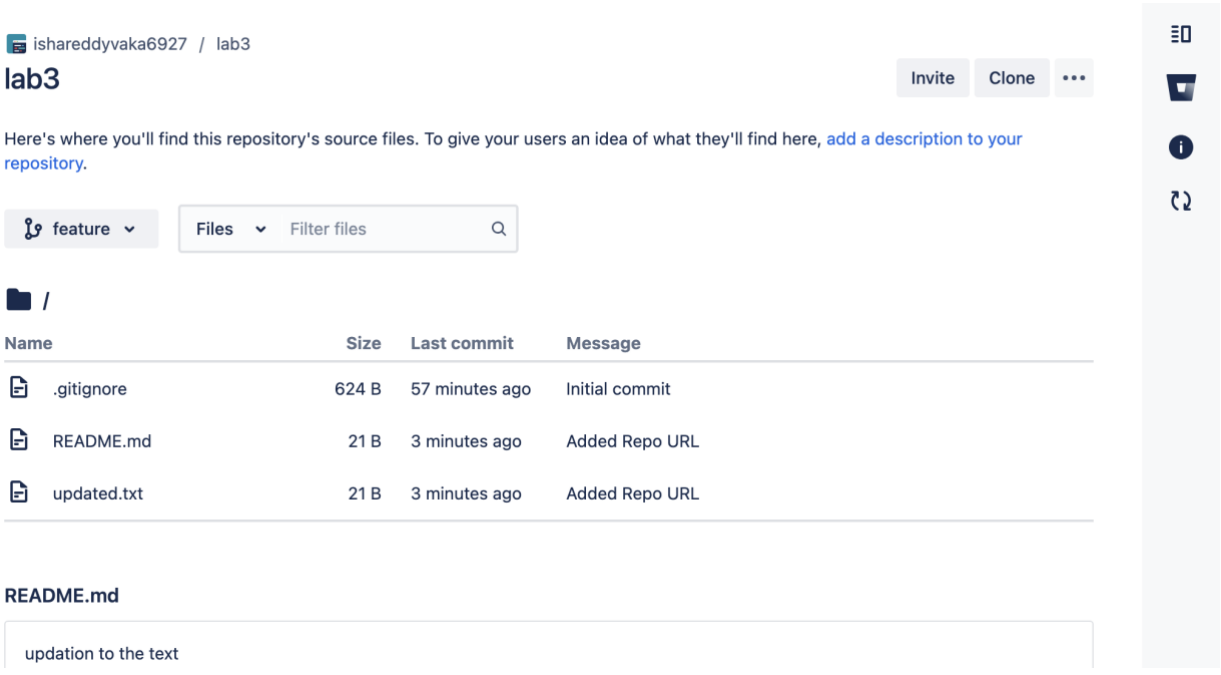
h. Create a new branch named "feature"
i. Switch to the "feature" branch
j. Pushing Changes to Bitbucket

```
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % git checkout -b feature
Switched to a new branch 'feature'
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % git push origin feature
Password for 'https://ishareddyvaka@bitbucket.org':
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), 368 bytes | 368.00 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/ishareddyvaka6927/lab3/pull-requests/new?source=feature&t=1
remote:
To https://bitbucket.org/ishareddyvaka6927/lab3.git
 * [new branch]      feature -> feature
```

4. Add Repository URL in a variable
    a. Add Repository URL in a variable
    b. Replace <repository_url> with the URL you copied from Bitbucket
    c. Push the "feature" branch to Bitbucket
    d. Check your Bitbucket repository to confirm that the new branch "feature" is available.

```
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % git add .
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % git commit -m "Added Repo URL"
[feature ecb6c4c] Added Repo URL
 Committer: Isha reddy Vaka <ishareddyvaka@Ishas-MacBook-Air.local>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 3 files changed, 2 insertions(+), 46 deletions(-)
 delete mode 100644 filename.txt
 create mode 100644 updated.txt
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % git push origin feature
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 336 bytes | 336.00 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/ishareddyvaka6927/lab3/pull-requests/new?source=feature&t=1
remote:
To https://bitbucket.org/ishareddyvaka6927/lab3.git
   60ede15..ecb6c4c  feature -> feature
```

5. Collaborating through Merge Requests
   a. Create a merge request on Bitbucket
   b. Review and merge the merge request



ishareddyvaka6927 / lab3 / lab3 / Pull requests

Feature

IV feature → main OPEN

#1 • Created 2 seconds ago • Last updated 1 second ago

Approve Merge •••

Overview Files changed 2 Commits 2

Description

- Edited_example.txt
- Added Repo URL

0 attachments

There aren't any attachments. Browse to upload

Activity All activity

IV What do you want to say?

0 builds

It looks like you haven't configured a build tool yet. You can use Bitbucket Pipelines to build, test and deploy your code.

Your existing plan already

6. Syncing Changes
    a. After the merge request is merged, update your local repository

```
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % 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)
(base) ishareddyvaka@Ishas-MacBook-Air lab3 % 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), 228 bytes | 114.00 KiB/s, done.
From https://bitbucket.org/ishareddyvaka6927/lab3
 * branch            main       -> FETCH_HEAD
   4ef5569..cace47b  main       -> origin/main
Updating 60ede15..cace47b
Fast-forward
 README.md    | 46 +----------------------------------------------
 filename.txt |  1 -
 updated.txt  |  1 +
 3 files changed, 2 insertions(+), 46 deletions(-)
 delete mode 100644 filename.txt
 create mode 100644 updated.txt
```

Result:

Therefore, we've successfully performed all the Bitbucket operations using Git.