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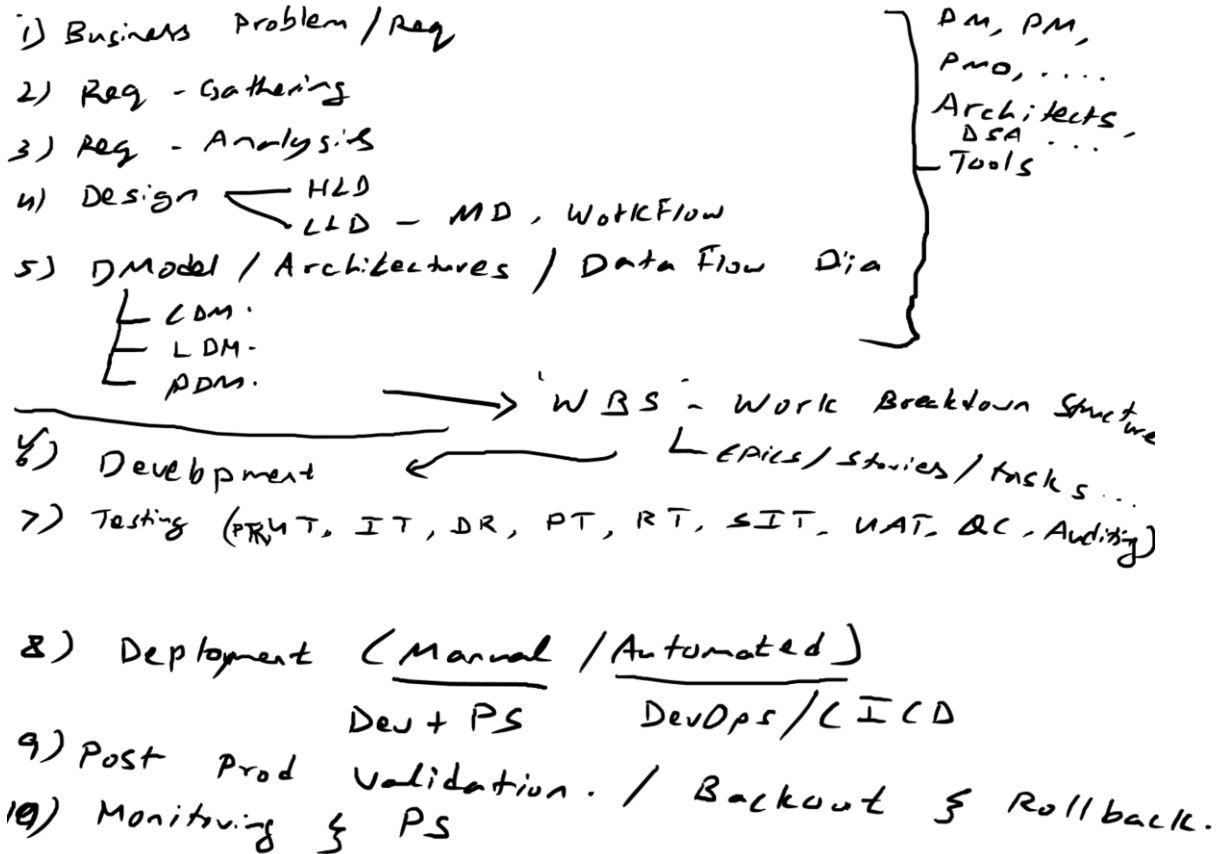
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[CICD – Continuous Integration & Continuous Delivery/Deployment \(DEVOPS\)](#)

What SDLC model or how you are productionizing the end to end development code?

Tell all SDLC stories and importantly “After requirement, dev, testing, I commit & Push the code into GitHub and then Jenkins pipeline configured by our Devops team will move the code to GCP bucket, so that Airflow can pick it and run the Data pipelines in the Prod env on the predefined schedule... Please correct me.

SDLC - Software Dev Life Cycle.



Scrum Master/ Agile coach

1. SDLC model – **Agile (Sprint (releases) planning)** & Scrum/RAD/Waterfall/V-Model
2. Daily Standup calls we will have in the morning (getting work assigned/discuss about the work we are going to do) and evening (questions/doubts/challenges/show stoppers)

3. Release Cycle – Biweekly Sprints created with different Jira ticket – user story points (requirement) 3/5/8/13 (Work breakdown structure) – split into multiple sub tasks.. Stories can be put in the behind to execute later (backlog), spike story (came adhoc based on priority we will execute).

Informal (adhoc) –

Leads/Clients provide/Source systems/Design team/allocate some work mails/chats/adhoc calls -> Developer/Data Analyst/TL/Architech -> (extract data -> filtration -> curation) .hql/.sql/.py/.bql -> Validation/Review/UnitTesting/~~QA/Testing/UAT~~ -> upload the code Dev Server/GDrive/Mail/Chat window -> Prod Deployment team/Onshore move the code to -> Production -> Prod Deployment team use the Release document and start the code to run on a defined schedule.

Formal –

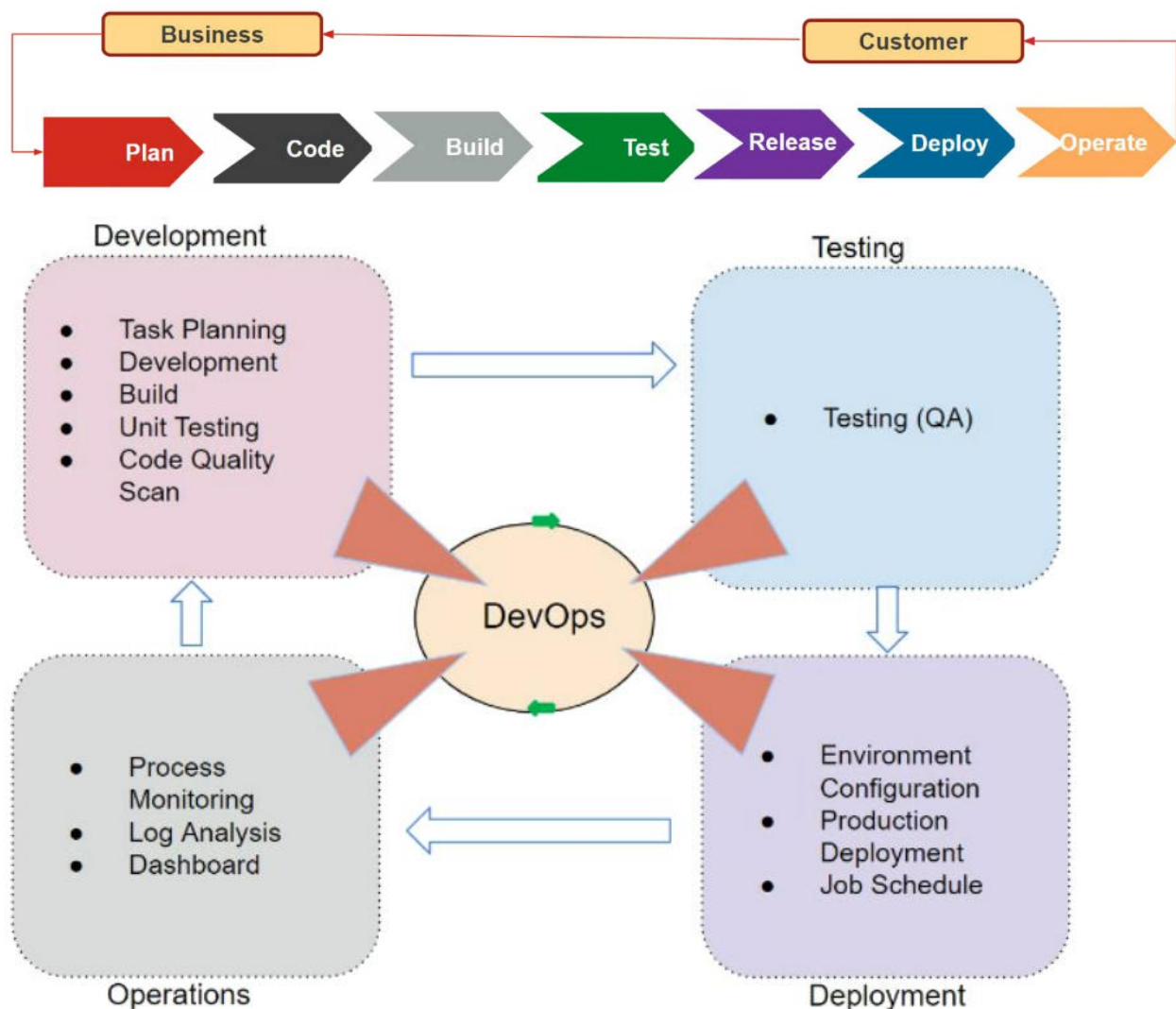
Confluence HLD (Business team requirements) -> LLD documents (Artifacts RACI charts, WBS, DFD, ER Diagrams, Mapping Documents etc.,) (Enablement team/Data modelers/Design team/DSA/TL/BA) ->

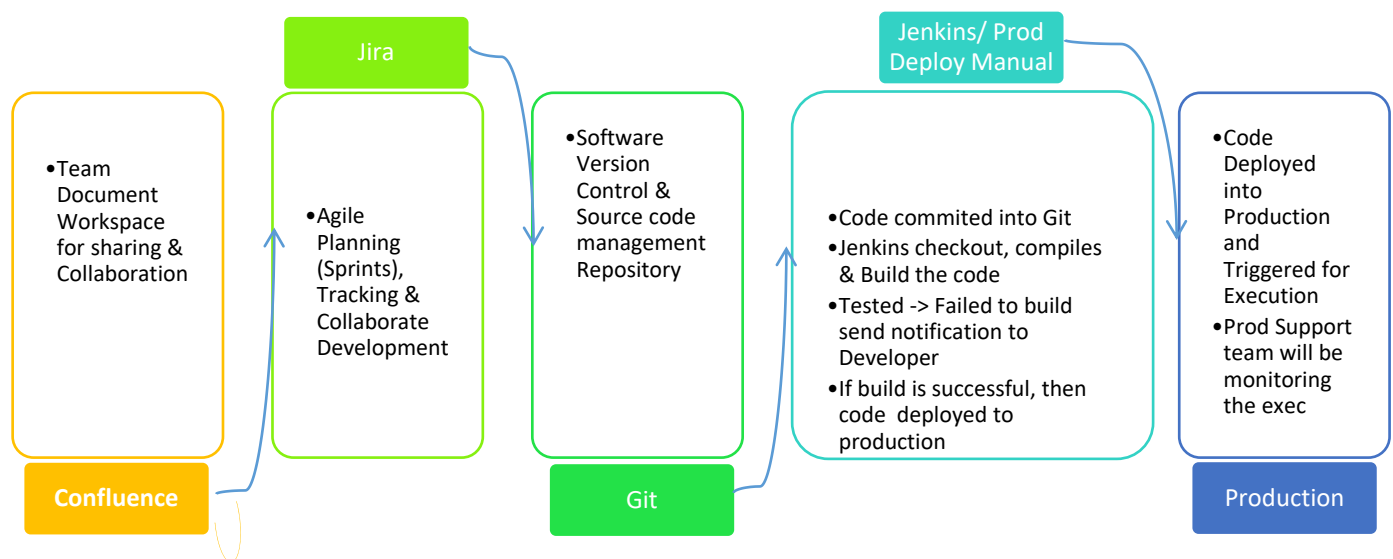
Jira stories (Epics -> Functional Stories & Technical Stories) assigned (PMO assigns Developers/Leads/Architects/Managers)-> Grooming call (Scrum Master or Agile coach will track the progress Managers/clients/architects/Developers) -> **Jira** Stories divided into (Tasks) (Tasks assigned to TLs/Architects/Data engineers/Data Analysts) -> Development (Data engineer) -> **Jira** tickets updated (open-> ready for iteration -> inprogress->cancel/ready for prod(RFP)->Done) (Data engineers updates comments and change status on a regular basis)->

Git/Github/VCS/SCM/bitbucket (**Dev/feature** branch) (Data engineer)-> Peer Review (Lead/Data engineer)-> Unit Testing/test evidence (Data engineer)-> dry run + Integration Testing (Data engineer/Testing team) -> Checkout code from **Git** and deploy into UAT/Pre Prod Server (Data engineer)-> Run the code in UAT (Data engineer)-> Pre Prod/UAT Validation (Design Team/Enablement Team/Data Solution Architects/Leads/Architects) -> Checkin the final code to **Git** (**Master/Main** branch) (Data engineer)->

Jenkins Pipeline (Checkout code from Git -> Build of code -> Test of code)
(DevOps engineer team) -> **Jenkins Pipeline** (Shell Scripts/Terraform/AWS Code
Deploy/GCP Workflow Manager/Azure Devops components) do a Prod
Deployment (DevOps engineer)-> Production support team monitor

Leads/Clients provide/allocate some work through (Confluence) Atlassian ->



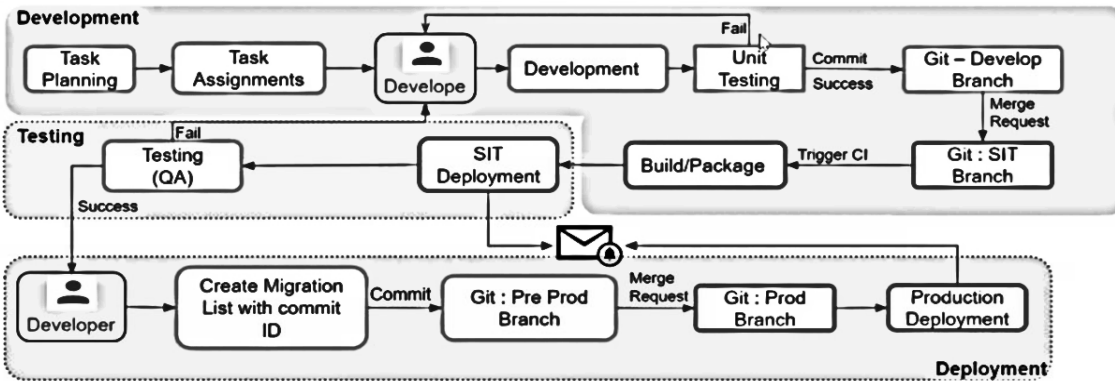


Confluence – Knowledge base (documents, stories, supportive content, release steps, back out scripts, support steps)

Jira - Epics (larger stories Dev/Maintenance/Enhance/Bugs) Stories --> Tasks/Issues -> Subtasks (Stories)

Git - GitHub is a code hosting platform for collaboration and version control. GitHub lets you (and others) work together on projects.

Jenkins is an open-source Continuous Integration and Continuous Deployment (CI/CD) tool for automating the software development life cycle (SDLC).



Agile – Sprints (release cycle) consist of stories and epic can roll over to multiple sprint. Sprint cycle can be 2 weeks or 5 days etc depending on project model

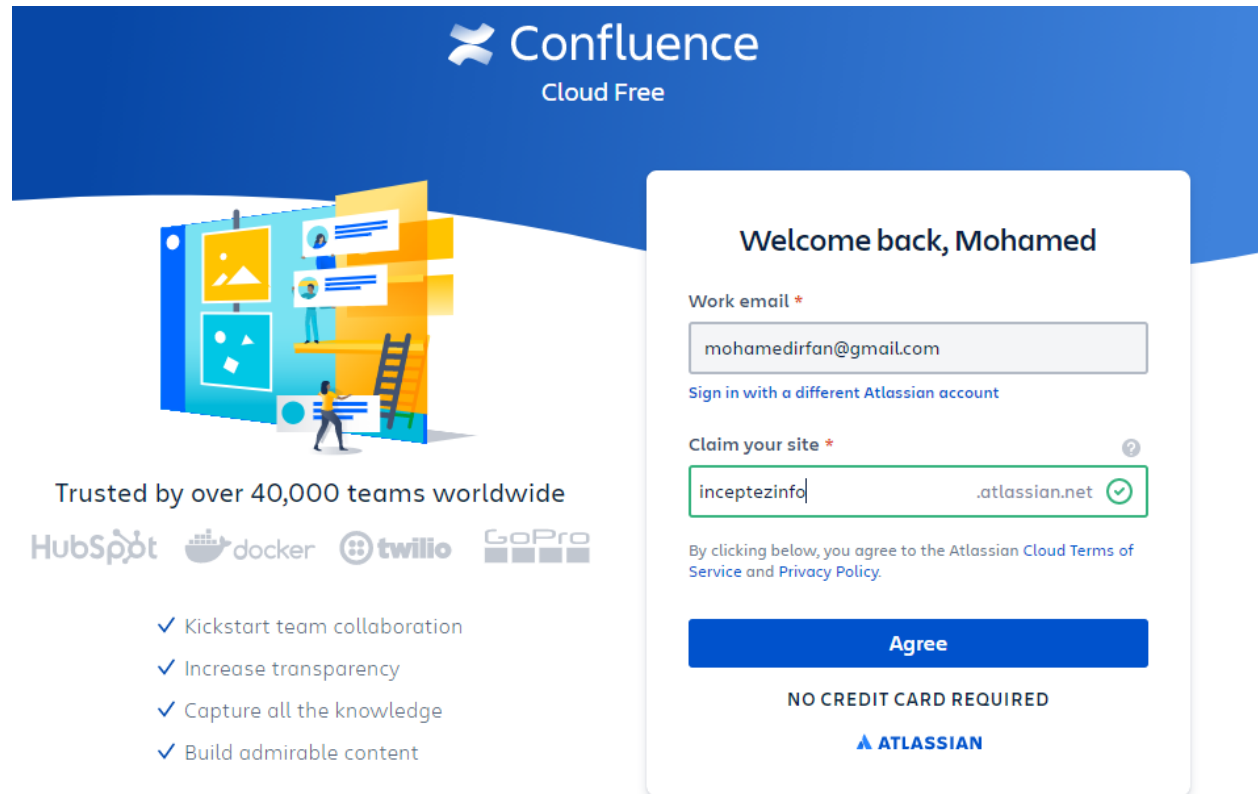
Prerequisites (Install the following tools in Windows):

1. Install Github for desktop (Git Cli, Git Plugins for Pycharm, Git desktop, Git Web Gui)
<https://desktop.github.com/>
2. Install java 11 & Jenkins
https://drive.google.com/drive/folders/1eomjZZZ0sf9UvlgmVPD4DoCVa3_U5elt?usp=share_link
3. Install and Configure Pycharm for windows
https://docs.google.com/document/d/1tiMiDEmsKav03khFLVxFVqbgHQx_GY-V/edit?usp=share_link&ouid=106781519779062697823&rtpof=true&sd=true
4. Link for Confluence and Jira
<https://www.atlassian.com/software/confluence/free>
5. Link for Git
<https://github.com/mohamedirfan>
6. Link for Jenkins
<https://www.jenkins.io/download/thank-you-downloading-windows-installer-stable>

Confluence:

Confluence is a team workspace where knowledge and collaboration meet. Dynamic pages give your team a place to create, capture, and collaborate on any project or idea.

<https://www.atlassian.com/software/confluence/free>



The image shows the Confluence Cloud Free landing page. At the top, the Confluence logo and 'Cloud Free' text are displayed on a blue background. Below this, there is an illustration of a person standing next to a large, colorful, 3D block structure representing a workspace. To the right of this illustration is a white login/signup form. The form has a blue header with the text 'Welcome back, Mohamed'. It contains two main sections: 'Work email' with a text input field containing 'mohamedirfan@gmail.com' and a link to 'Sign in with a different Atlassian account'; and 'Claim your site' with a text input field containing 'inceptezinfo' and a dropdown menu showing '.atlassian.net' with a green checkmark icon. Below the form, there is a blue 'Agree' button, the text 'NO CREDIT CARD REQUIRED', and the Atlassian logo. On the left side of the page, below the illustration, it says 'Trusted by over 40,000 teams worldwide' and lists logos for HubSpot, Docker, Twilio, and GoPro. Below these logos is a list of four bullet points: 'Kickstart team collaboration', 'Increase transparency', 'Capture all the knowledge', and 'Build admirable content'.

Confluence
Cloud Free

Trusted by over 40,000 teams worldwide

HubSpot docker twilio GoPro

- ✓ Kickstart team collaboration
- ✓ Increase transparency
- ✓ Capture all the knowledge
- ✓ Build admirable content

Welcome back, Mohamed

Work email *

mohamedirfan@gmail.com

[Sign in with a different Atlassian account](#)

Claim your site *

inceptezinfo .atlassian.net

By clicking below, you agree to the [Atlassian Cloud Terms of Service](#) and [Privacy Policy](#).

Agree

NO CREDIT CARD REQUIRED

ATLASSIAN



Invite your teammates

Bring your team along for the ride!

mohamedirfan@gmail.com

info@inceptez.com

inceptezwebd35@gmail.com

☒ Let my teammates invite other people

You can change these settings at any time.

[Continue](#)

Create (custom/from template/import) -> Publish the project -> Share to users






Jira:

Jira is a software application used for issue tracking and project management. The tool, developed by the Australian software company Atlassian

Issue Types

Jira can be used to track many different types of issues. The currently defined issue types are listed below. In addition, you can add more in the administration section.

For Regular Issues






 Epic	A big user story that needs to be broken down. Created by Jira Software - do not edit or delete.
 Improvement	An improvement or enhancement to an existing feature or task.
 Task	A small, distinct piece of work.
 New Feature	A new feature of the product, which has yet to be developed.
 Bug	A problem or error.

For Sub-Task Issues

 Sub-task
--











Priority Levels

An issue has a priority level which indicates its importance. The currently defined priorities are listed below. In addition, you can add more priority levels in the administration section.

 Highest	This problem will block progress.
 High	Serious problem that could block progress.
 Medium	Has the potential to affect progress.
 Low	Minor problem or easily worked around.
 Lowest	Trivial problem with little or no impact on progress.

Statuses

Each issue has a status, which indicates the stage of the issue. In the default workflow, issues start as being Open, progressing to In Progress, Resolved and then Closed. Other workflows may have other status transitions.

 OPEN	The issue is open and ready for the assignee to start work on it.
 IN PROGRESS	This issue is being actively worked on at the moment by the assignee.
 REOPENED	This issue was once resolved, but the resolution was deemed incorrect. From here issues are either marked assigned or resolved.
 RESOLVED	A resolution has been taken, and it is awaiting verification by reporter. From here issues are either reopened, or are closed.
 CLOSED	The issue is considered finished, the resolution is correct. Issues which are closed can be reopened.
 BUILDING	Source code has been committed, and JIRA is waiting for the code to be built before moving to the next status.
 BUILD BROKEN	The source code committed for this issue has possibly broken the build.
 TO DO	
 IN REVIEW	
 DONE	

Git-Hub – WebUI, Desktop , IDE (Eclipse) & CLI

GIT (2005) – Version control

A system that keeps records of your changes

Allows for collaborative development

Allows you to know who made what changes and when

Allows you to revert any changes and go back to a previous state

Distributed version control

Users keep entire code and history on their location machines

- Users can make any changes without internet access
- (Except pushing and pulling changes from a remote server)

<https://desktop.github.com/>

<https://github.com/yourname>



Developer create code and wanted to share the final code into Github directly to Master.

1. Create a repository
2. Clone into local
3. Open in Github Desktop
4. Create a file and add inside the staging area from working directory
5. Do a local Commit to master
6. Push to github by clicking push to origin

Developer modify the code and wanted to share the code into his own branch and get reviewed and merged to the master branch.

1. Create a Branch in local or remote, choose the new branch , go to repository > pull
2. Modify the local code
3. Do a local commit to a new branch, then push origin to remote
4. Create a pull request (compare & pull request)
5. Review the code with comments.
6. Do merge (conform merge) and commit the changes from your branch to the master branch
7. Open and merge a pull request > branch to the master

GITHUB - 2008

What is GitHub?

- www.github.com
- Largest web-based git repository hosting service
 - Aka, hosts 'remote repositories'
- Allows for code collaboration with anyone online
- Adds extra functionality on top of git
 - UI, documentation, bug tracking, feature requests, pull requests, and more!

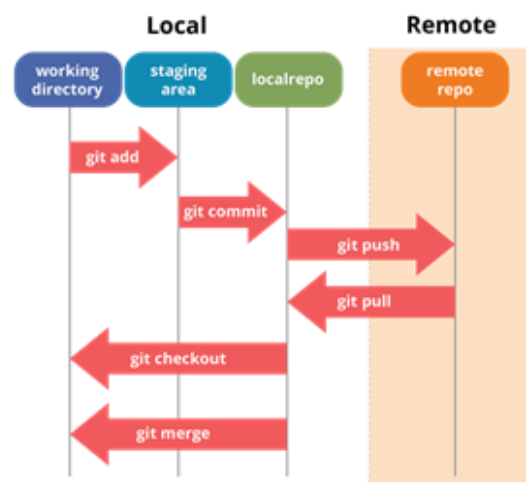


Working Directory - Working Directory which holds the actual files what you have coded.

A staging step (index) in git allows you to continue making changes to the working directory

Local Repo (Head) - when you decide to interact with version control repository (locally in your machine), it allows you to record changes in small commits.

Remote Repo - To send the changes to your remote repository, execute git push



<https://desktop.github.com/>

Welcome to GitHub Desktop

GitHub Desktop is a seamless way to contribute to projects on GitHub and GitHub Enterprise Server. Sign in below to get started with your existing projects.

New to GitHub? [Create your free account.](#)

[Sign in to GitHub.com](#)

After signin with your username and password

Configure Git

This is used to identify the commits you create. Anyone will be able to see this information if you publish commits.

Name

mohamedirfan

Email

mohamedirfan@gmail.com

[Continue](#)

[Cancel](#)

File Edit View Repository Branch Help

Let's get started!

Add a repository to GitHub Desktop to start collaborating

[Create a tutorial repository...](#)

[Clone a repository from the Internet...](#)

[+ Create a New Repository on your hard drive...](#)


[Add an Existing Repository from your hard drive...](#)



Filter your repositories

Your repositories

- mohamedirfan/hive
- mohamedirfan/https---github.com-basithmohamed-izrepo
- mohamedirfan/inceptez-scala
- mohamedirfan/iz-scala
- mohamedirfan/izrepo
- mohamedirfan/izwd19
- mohamedirfan/izwe28

ified emails. We recommend [verifying](#) at least one email.
support team verify ownership if you lose account access and allows you to receive all the notifications you ask for.

 The password you provided is weak and can be easily guessed. To increase your security, please [change your password](#) as soon as possible.
[Read our documentation on safer password practices.](#)



Set your status

nohamedirfan

Overview

Repositories **5**

Projects **1**

Stars **0**

Followers **0**

Following **0**

Find a repository...

Type: All

Language: All

New

inceptez-scala
scala workouts

Scala Apache License 2.0 Updated 7 days ago

Star

<https---github.com-basithmohamed-izrepo> Private

Updated 7 days ago

Star



Activate Windows

Create a new repository

A repository contains all project files, including the revision history.

Owner

Repository name *

 mohamedirfan / izrepo 

Great repository names are short and memorable. Need inspiration? How about **supreme-octo-adventure**?

Description (optional)



Public

Anyone can see this repository. You choose who can commit.




Private

You choose who can see and commit to this repository.

☒ **Initialize this repository with a README**

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: Scala ▼

Add a license: Apache License 2.0 ▼ 

Create repository

ub, Inc. [US] | <https://github.com/mohamedirfan/izrepo>

⚠ The password you provided is weak and can be easily guessed. To increase your security, please [change your password](#) as soon as possible.
Read our documentation on [safer password practices](#).

mohamedirfan / izrepo Unwatch 1 Star 0 Fork 0

[Code](#) [Issues 0](#) [Pull requests 0](#) [Projects 0](#) [Wiki](#) [Insights](#) [Settings](#)

No description, website, or topics provided. [Edit](#)

[Manage topics](#)

1 commit 1 branch 0 releases 1 contributor

Branch: master New pull request [Create new file](#) [Upload files](#) [Find file](#) [Clone or download](#)

Clone with HTTPS [Use SSH](#)
Use Git or checkout with SVN using the web URL.
<https://github.com/mohamedirfan/izrepo.g> [Copy](#)

[Open in Desktop](#) [Download ZIP](#)

izrepo Activate Windows
Go to Settings to activate Windows.

Open in Desktop

File -> options -> signin

File -> clone repository -> url

File Edit View Repository Branch Help

Current repository: **repo2** Current branch: **master** Pull origin: Last fetched 7 minutes ago

Changes History

created the testdata.txt

committed to branch1

Initial commit

Clone a repository

GitHub.com Enterprise URL

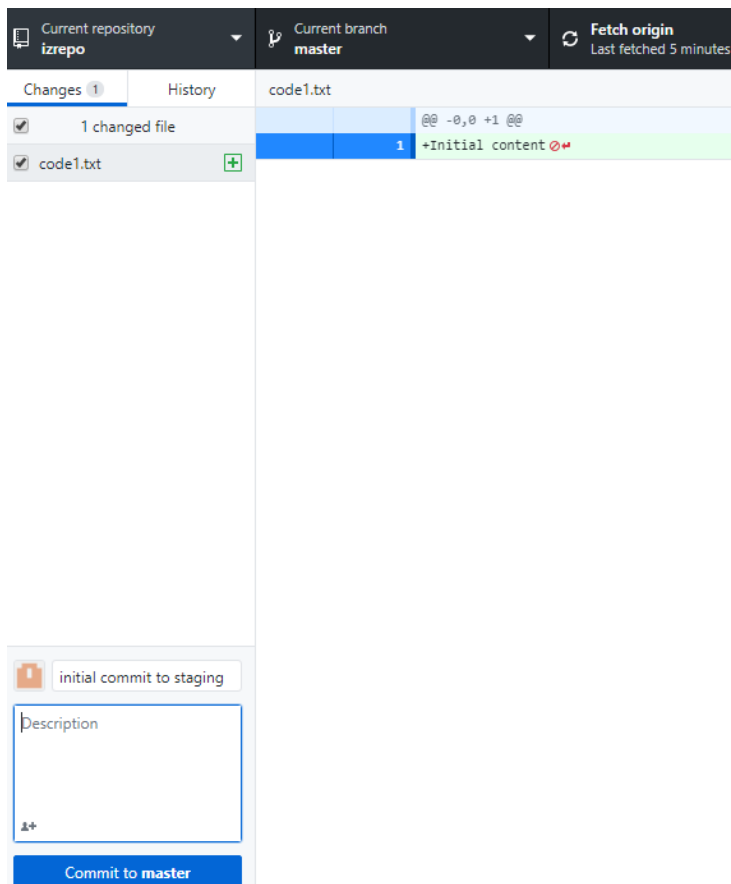
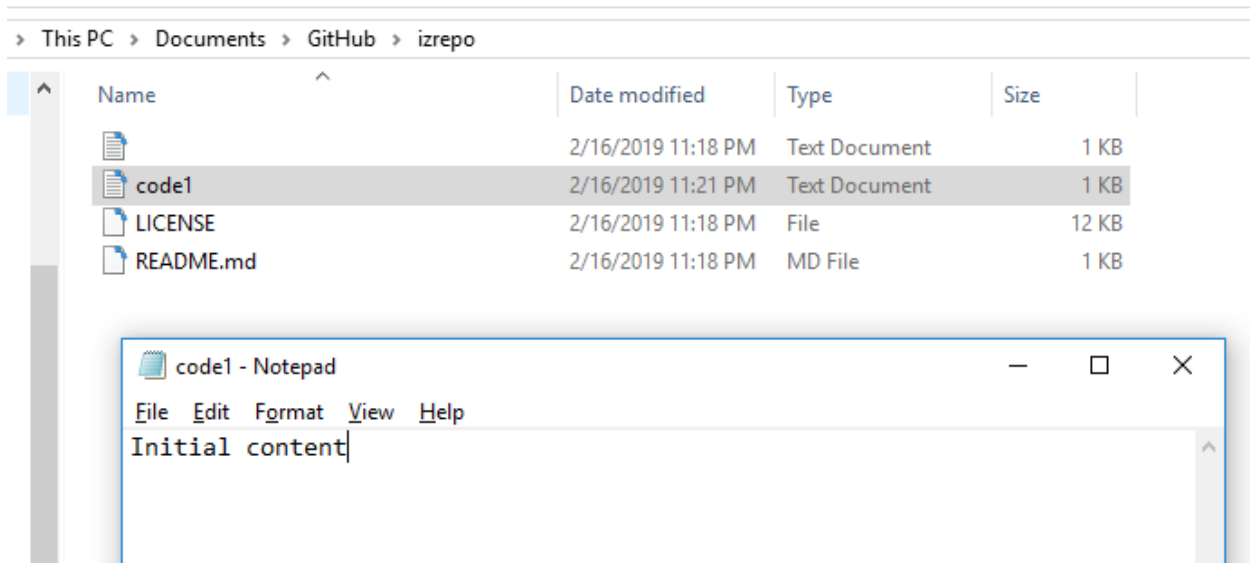
Repository URL or GitHub username and repository (hubot/cool-repo)

<https://github.com/mohamedirfan/izrepo>

Local path

C:\Users\inceptez\Documents\GitHub\izrepo [Choose...](#)

[Clone](#) [Cancel](#)



FileEditViewRepositoryBranchHelp

Current repository
izrepo

Current branch
master

Pushing to origin
Total 3 (delta 1), reused 0 (delta 0)

ChangesHistory

0 changed files

No local changes

You have no uncommitted changes in your repository! Here are some friendly suggestions for what to do next.

Push 1 commit to the origin remote

You have one local commit waiting to be pushed to GitHub

Always available in the toolbar when there are local commits waiting to be pushed or `Ctrl P`

Push origin

View the files in your repository in Explorer

Repository menu or `Ctrl Shift F`

Show in Explorer

Open the repository page on GitHub in your browser

Repository menu or `Ctrl Shift G`

View on GitHub

GitHub, Inc. [US] | <https://github.com/mohamedirfan/izrepo>

mohamedirfan / izrepo

Unwatch 1Star 0Fork 0

CodeIssues 0Pull requests 0Projects 0WikiInsightsSettings

No description, website, or topics provided.

Edit

Manage topics

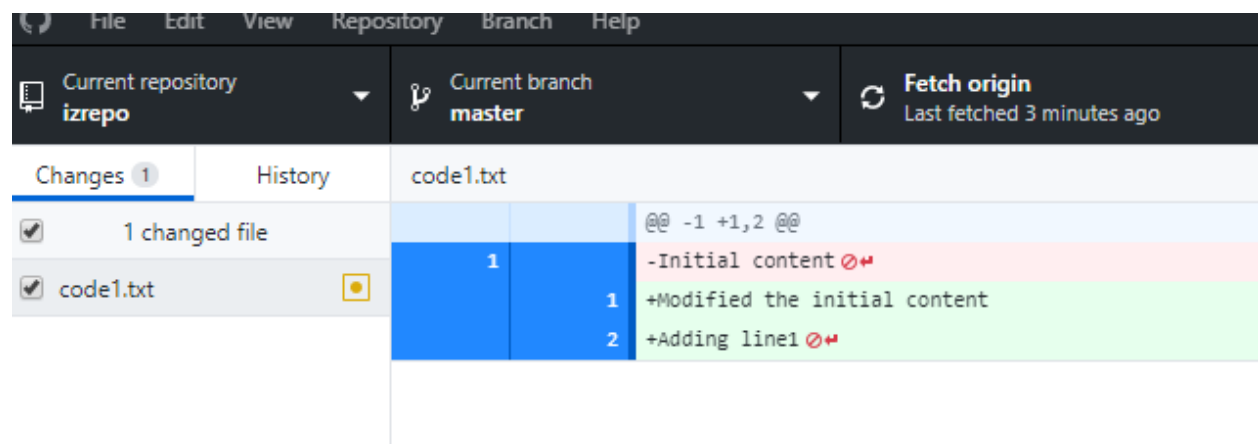
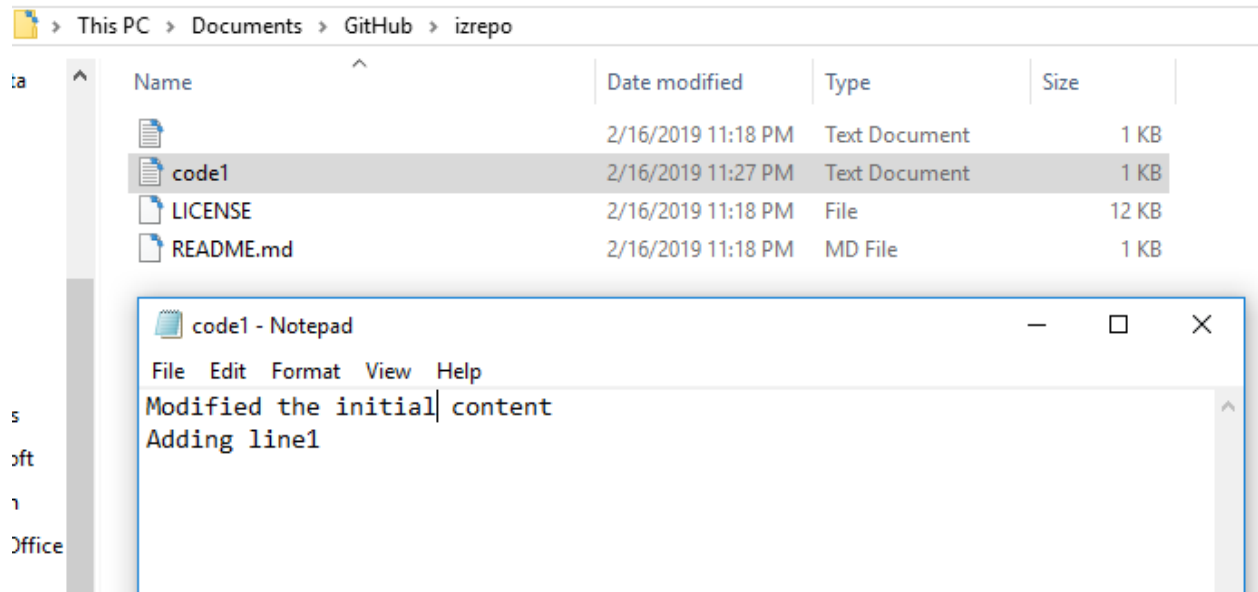
2 commits1 branch0 releases1 contributorApache-2.0

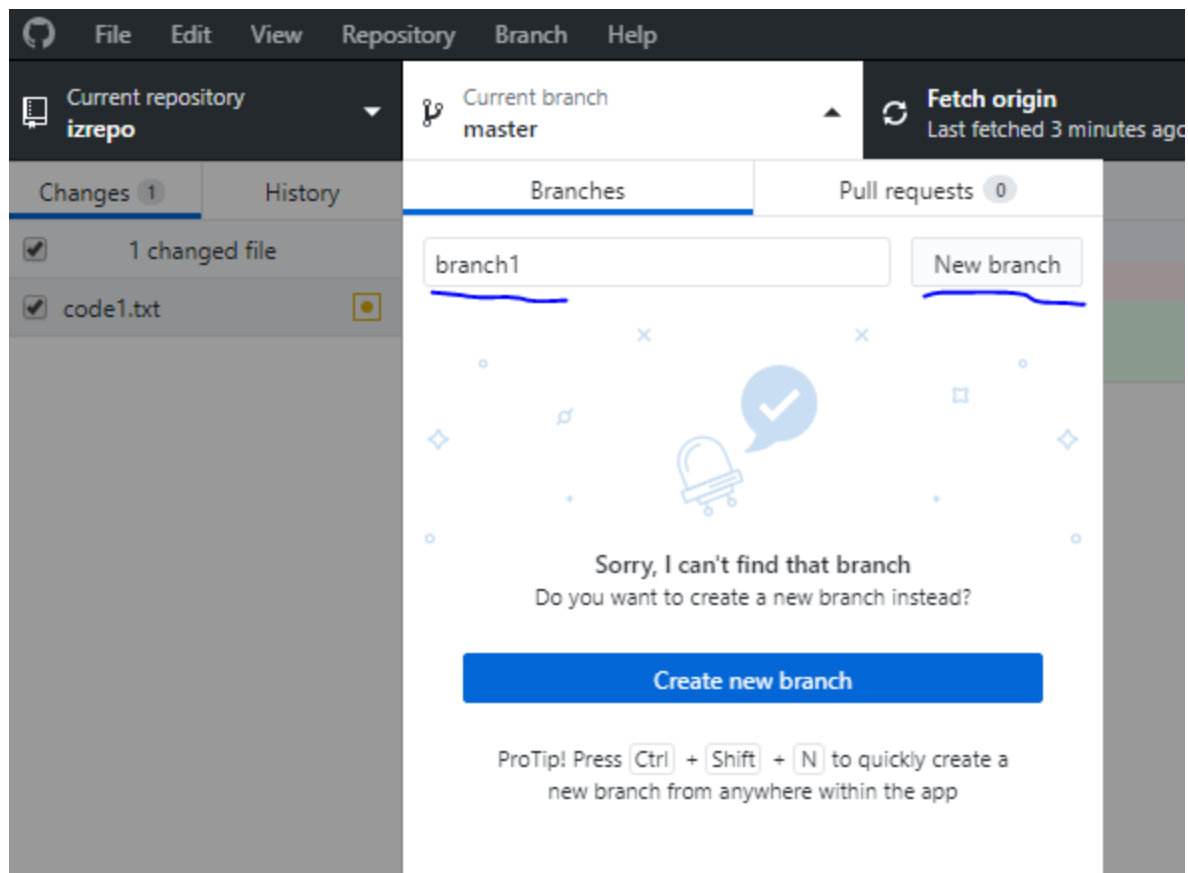
Branch: masterNew pull request

Create new fileUpload filesFind fileClone or download

basithmohamed initial commit to stagingLatest commit c4e1461 a minute ago

.gitignore	Initial commit	12 minutes ago
LICENSE	Initial commit	12 minutes ago
README.md	Initial commit	12 minutes ago
code1.txt	initial commit to staging	a minute ago





🔄

File

Edit

View

Repository

Branch

Help

📁

Current repository

▼

izrepo

🔗

Current branch

▼

branch1

☁️

Publish branch

Publish this branch to GitHub

Changes 1

History

✓

1 changed file

✓

code1.txt

📁

code1.txt

@@ -1 +1,2 @@

1 -Initial content ❌➕

1 +Modified the initial content

2 +Adding line1 ❌➕

🔒

committing to branch1

Description

👤+

Commit to branch1

FileEditViewRepositoryBranchHelp

Current repository
izrepo

Current branch
branch1

Publish branch

Publish this branch to GitHub

Changes

History

0 changed files

No local changes

You have no uncommitted changes in your repository! Here are some friendly suggestions for what to do next.

Publish your branch

The current branch (branch1) hasn't been published to the remote yet. By publishing it to GitHub you can share it, open a pull request, and collaborate with others.

Always available in the toolbar or `Ctrl` `P`

Publish branch

View the files in your repository in Explorer

Repository menu or `Ctrl` `Shift` `F`

Show in Explorer

Open the repository page on GitHub in your browser

Repository menu or `Ctrl` `Shift` `G`

View on GitHub

Summary (required)

GitHub, Inc. [US] | <https://github.com/mohamedirfan/izrepo>

mohamedirfan / izrepo

Unwatch

1

Star

0

Fork

0

<> Code

Issues 0

Pull requests 0

Projects 0

Wiki

Insights

Settings

No description, website, or topics provided.

Edit

Manage topics

2 commits

1 branch

0 releases

1 contributor

Apache-2.0

Your recently pushed branches:

branch1 (less than a minute ago)

Compare & pull request

Branch: master

New pull request

Create new file

Upload files

Find file

Clone or download

basithmohamed

initial commit to staging

Latest commit c4e1461 7 minutes ago

.gitignore	Initial commit	18 minutes ago
LICENSE	Initial commit	18 minutes ago
README.md	Initial commit	18 minutes ago
code1.txt	initial commit to staging	7 minutes ago


<> Code ⓘ Issues 0 🔄 Pull requests 0 📁 Projects 0 📖 Wiki 📊 Insights ⚙ Settings

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).

🔗 base: master ◀ compare: branch1 ▼

✓ Able to merge. These branches can be automatically merged.

 committing to branch1

Write Preview

AA B i “ < > 🔗 ☰ ☷ ☹ @ 📎 ↶

compare the code and merge to master|

Attach files by dragging & dropping, selecting them, or pasting from the clipboard.

📄 Styling with Markdown is supported

Create Pull Request ▼

Reviewers

No reviews

Assignees

No one—assign yourself

Labels

None yet

Projects

None yet


Milestone

No milestone

committing to branch1 #1

🔗 Open mohamedirfan wants to merge 1 commit into master from branch1


💬 Conversation 0 🔗 Commits 1 📄 Checks 0 📄 Files changed 1

 mohamedirfan commented just now

compare the code and merge to master

🔗 committing to branch1 b5f51e0

Add more commits by pushing to the **branch1** branch on **mohamedirfan/izrepo**.

 Continuous integration has not been set up
Several apps are available to automatically catch bugs and enforce style.

✓ This branch has no conflicts with the base branch
Merging can be performed automatically.

Merge pull request ▼ You can also open this in GitHub Desktop or view command line instructions.

Reviewers

No reviews

Assignees

No one—assign yourself

Labels

None yet

Projects

None yet

Milestone

No milestone

Notifications

🔊 Unsubscribe

committing to branch1 #1

 **Open** mohamedirfan wants to merge 1 commit into `master` from `branch1`

 Conversation 0  Commits 1  Checks 0  Files changed 1




mohamedirfan commented 2 minutes ago

Owner



compare the code and merge to master

 committing to branch1

b5f51e0

Add more commits by pushing to the `branch1` branch on mohamedirfan/izrepo.



Merge pull request #1 from mohamedirfan/branch1

committing to branch1

Confirm merge

Cancel

GitHub, Inc. [US] | <https://github.com/mohamedirfan/izrepo/pull/1>

committing to branch1 #1

 **Merged** mohamedirfan merged 1 commit into `master` from `branch1` just now

 Conversation 0  Commits 1  Checks 0  Files changed 1




mohamedirfan commented 3 minutes ago

Owner




compare the code and merge to master

 committing to branch1

b5f51e0



 mohamedirfan merged commit 313c4c8 into `master` just now

[Revert](#)



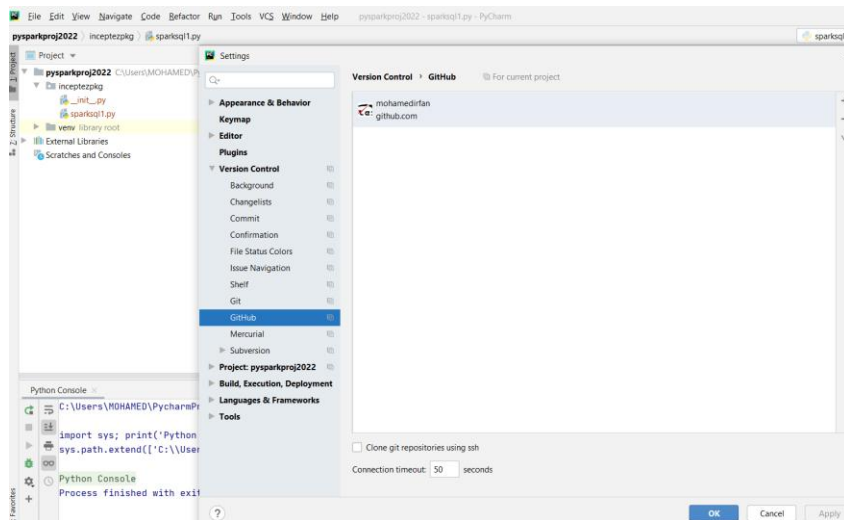
Pull request successfully merged and closed

You're all set—the `branch1` branch can be safely deleted.

[Delete branch](#)

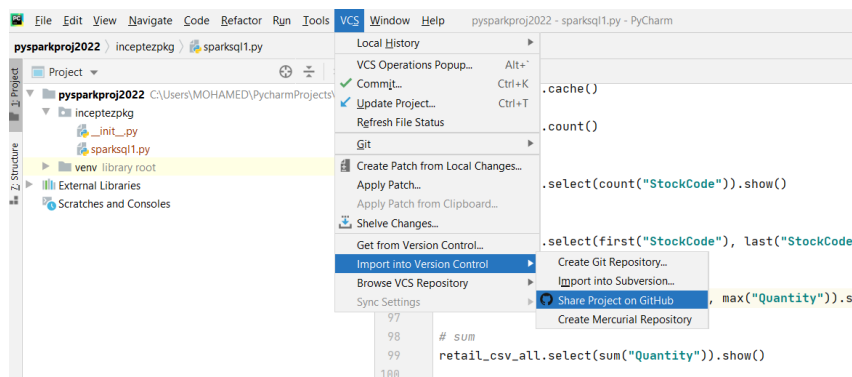
Git PyCharm Integration

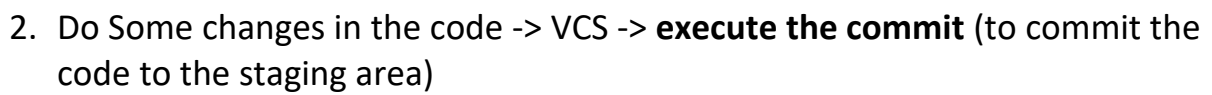
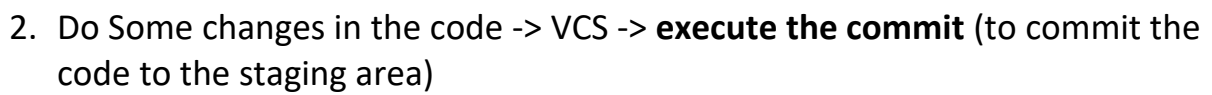
1. Login to <https://github.com>
2. <https://github.com/settings/tokens>
3. Generate new token (Classic) -> add some name to the note
 1. **repo** - select everything
 2. **gist** - select everything
 3. **org** - select only **read:org**
4. Pycharm -> file -> setting -> version control -> github -> choose token option and enter the token

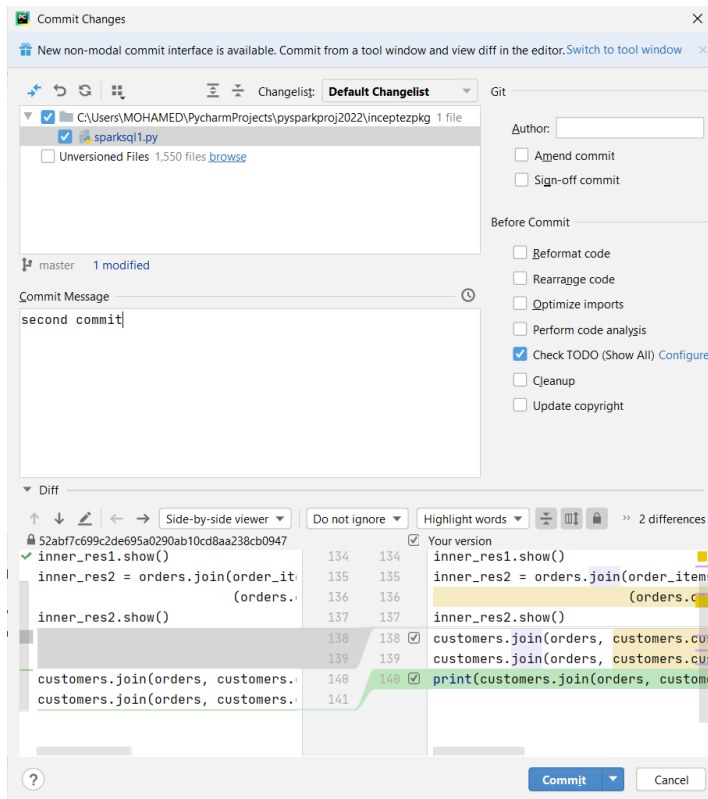


Share the project into Git:

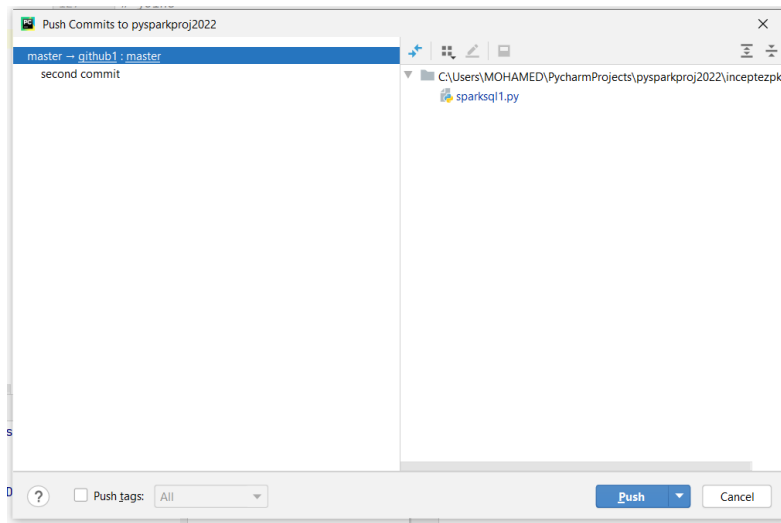
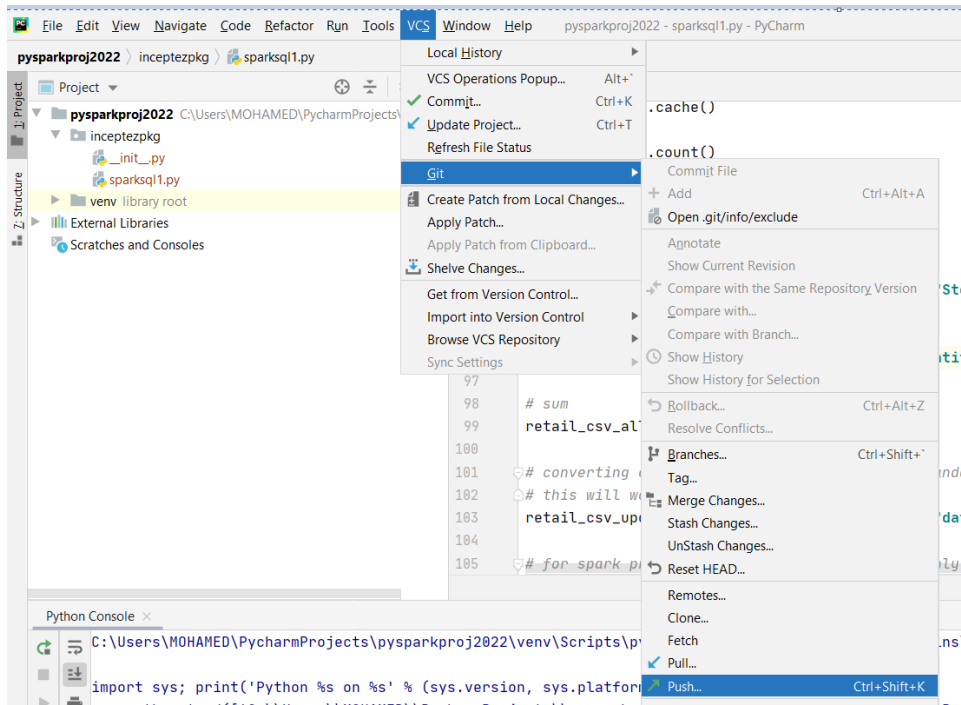
1. VCS -> Import into Version Control -> **Share Project on Github**







3. VCS -> execute the Push (to push the code to the internet Git repo)



Pulling the Code from Git:

1. Edit the code in the Github console

```
129 orders = spark.read.csv('E:/INCEPTEZ/TRAINING MATERIALS IZ RAW BOOKS/13 SPARK/PYSPARK/PYSPARK_2022/data/orders.csv',header=True,inferSchema=True)
130 order_items = spark.read.csv('E:/INCEPTEZ/TRAINING MATERIALS IZ RAW BOOKS/13 SPARK/PYSPARK/PYSPARK_2022/data/order_items.csv',header=True,inferSchema=True)
131 customers = spark.read.csv('E:/INCEPTEZ/TRAINING MATERIALS IZ RAW BOOKS/13 SPARK/PYSPARK/PYSPARK_2022/data/customers.csv',header=True,inferSchema=True)
132
133 inner_res1 = orders.join(order_items, orders.order_id == order_items.order_item_order_id)
134 inner_res1.show()
135 inner_res2 = orders.join(order_items, (orders.order_id == order_items.order_item_order_id) &
136                           (orders.order_id == order_items.order_item_order_id))
137 inner_res2.show()
138 customers.join(orders, customers.customer_id==orders.order_customer_id, 'left').show()
139 customers.join(orders, customers.customer_id==orders.order_customer_id, 'right').show()
140 print(customers.join(orders, customers.customer_id==orders.order_customer_id, 'left').count())
141 print(customers.join(orders, customers.customer_id==orders.order_customer_id, 'right').count())
```



Commit changes

updated in the give console

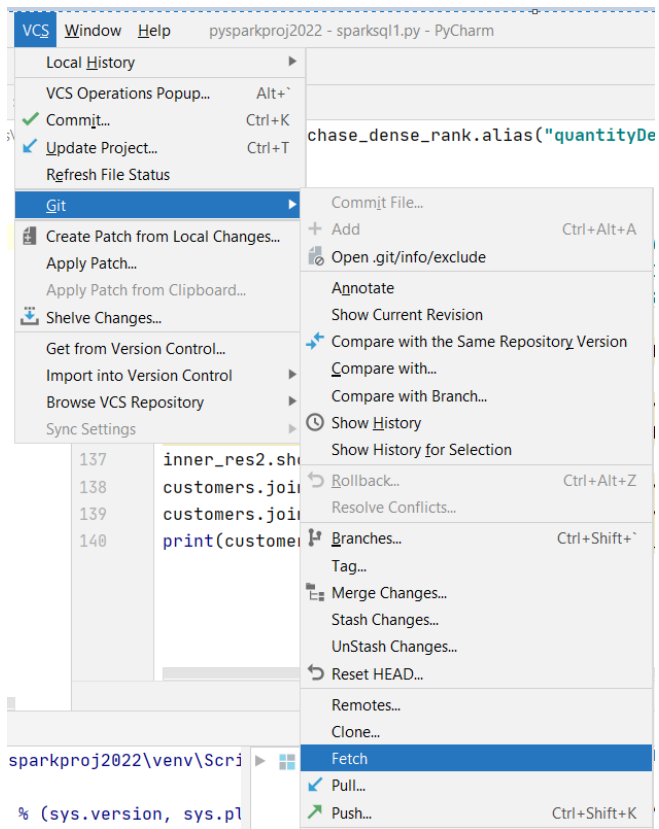
Add an optional extended description...

- ☒ Commit directly to the `master` branch.
- ☐ Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)

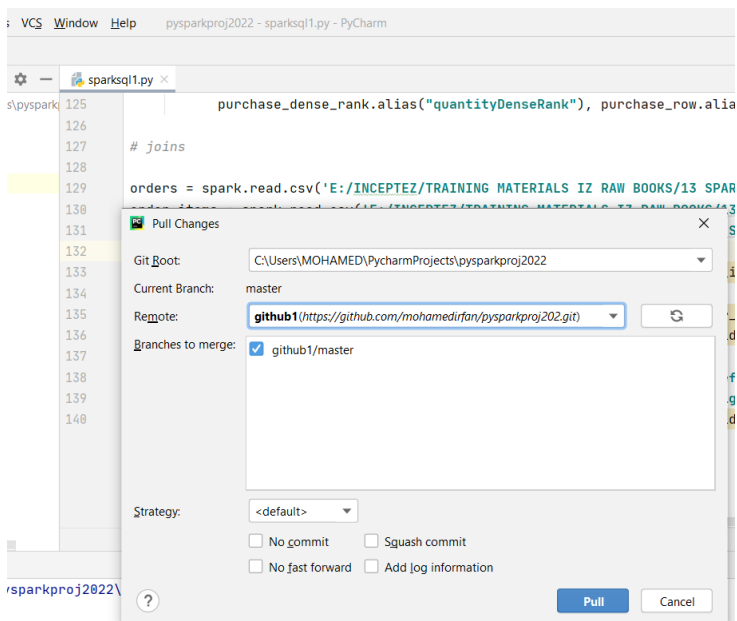
Commit changes

Cancel

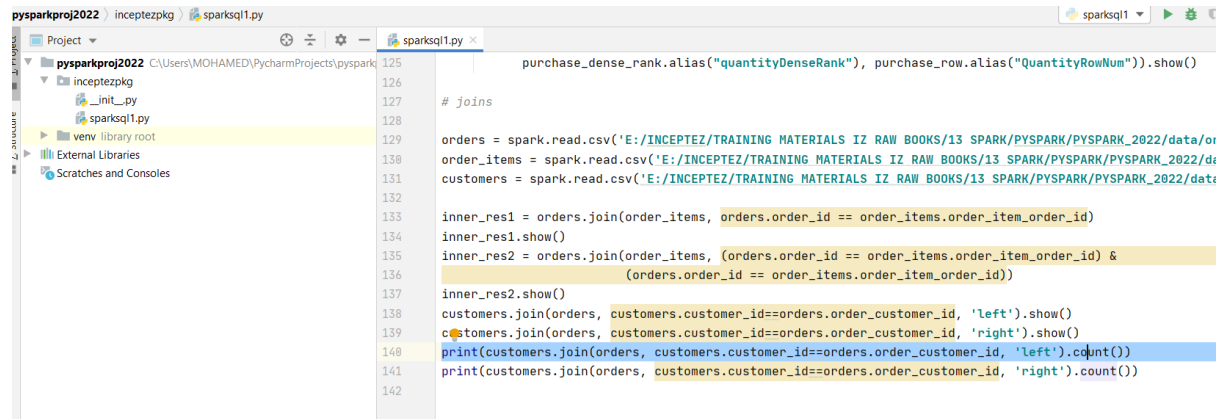
2. VCS -> Git -> **Fetch**(to fetch the code from the Git)



3. VCS -> Git -> **Pull**(to Pull the code from the Git)



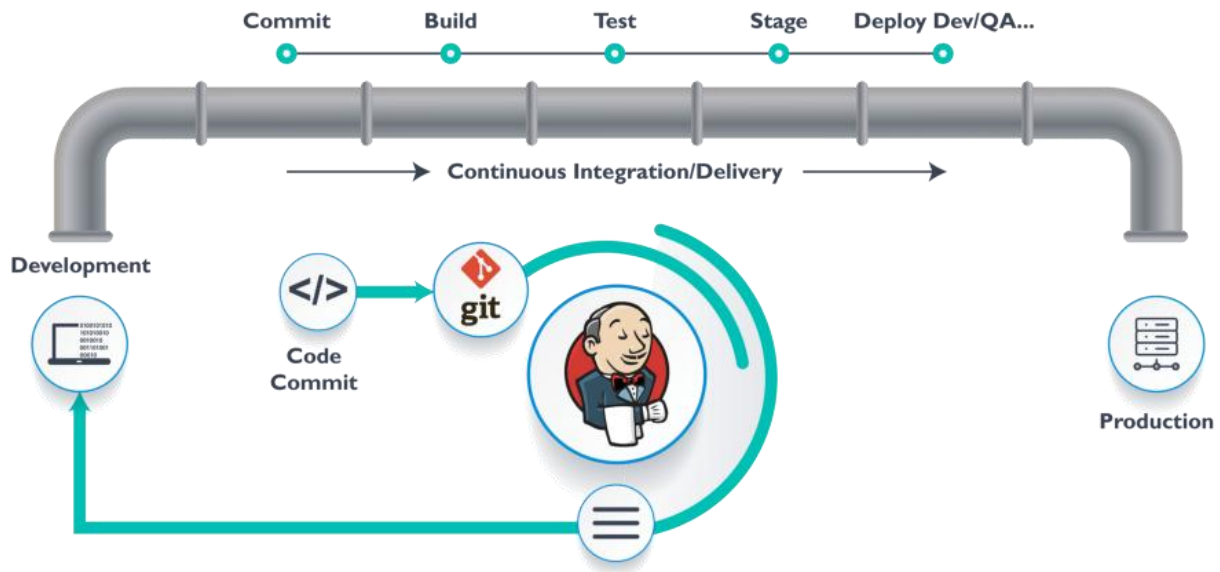
4. See the modified code in the Pycharm



The image shows a PyCharm IDE window with a project named 'pysparkproj2022'. The file explorer on the left shows the project structure, including a 'venv' directory and a 'library root'. The main editor displays a Python script named 'sparksq1.py' with the following code:

```
125 purchase_dense_rank.alias("quantityDenseRank"), purchase_row.alias("QuantityRowNum")).show()
126
127 # joins
128
129 orders = spark.read.csv('E:/INCEPTEZ/TRAINING MATERIALS IZ RAW BOOKS/13 SPARK/PYSPARK/PYSPARK_2022/data/or
130 order_items = spark.read.csv('E:/INCEPTEZ/TRAINING MATERIALS IZ RAW BOOKS/13 SPARK/PYSPARK/PYSPARK_2022/d
131 customers = spark.read.csv('E:/INCEPTEZ/TRAINING MATERIALS IZ RAW BOOKS/13 SPARK/PYSPARK/PYSPARK_2022/d
132
133 inner_res1 = orders.join(order_items, orders.order_id == order_items.order_item_order_id)
134 inner_res1.show()
135 inner_res2 = orders.join(order_items, (orders.order_id == order_items.order_item_order_id) &
136 (orders.order_id == order_items.order_item_order_id))
137 inner_res2.show()
138 customers.join(orders, customers.customer_id==orders.order_customer_id, 'left').show()
139 customers.join(orders, customers.customer_id==orders.order_customer_id, 'right').show()
140 print(customers.join(orders, customers.customer_id==orders.order_customer_id, 'left').count())
141 print(customers.join(orders, customers.customer_id==orders.order_customer_id, 'right').count())
142
```

Jenkins

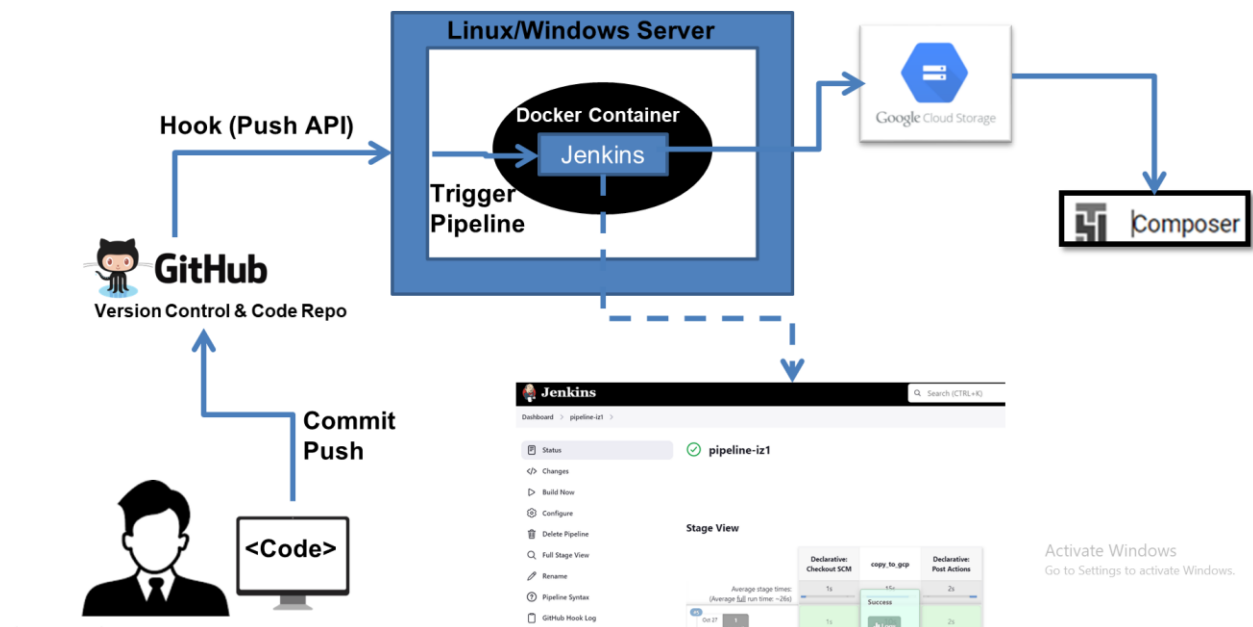


Download Jenkins and Java 11

<https://www.jenkins.io/download/thank-you-downloading-windows-installer-stable>

<https://www.techspot.com/downloads/downloadnow/5553/?evp=cc1002b8f24231deaf82043061a06561&file=6310>

CICD Git + Jenkins + Cloud Continuous Deployment



Check these documents for installing Jenkins and configure:



Installing and Configuring Jenkins on Windows with Git and GCS Deployment

Step 1: Install Jenkins on Windows

1. Download Jenkins from the official site: <https://www.jenkins.io/download/> (choose the Windows MSI installer). <https://www.jenkins.io/download/thank-you-downloading-windows-installer-stable/>
2. Run the installer (jenkins.msi) and install Jenkins as a Windows service.
3. Open Jenkins in the browser at <http://localhost:8080>
4. Unlock Jenkins using the initial password stored at:
C:\Program Files\Jenkins\secrets\initialAdminPassword
5. Install recommended plugins and create an admin user. (To log in, use the username: "admin" and the administrator password you used to access the setup wizard.)

Step 2: Install Required Plugins

Go to: Manage Jenkins → Plugins → Available Plugins and install:

- Git Plugin
- Google Cloud Storage Plugin
- Pipeline Plugin

Step 3: Configure Git in Jenkins

1. Install Git on Windows from: <https://git-scm.com/download/win>
2. In Jenkins → Manage Jenkins → Global Tool Configuration → Git → Add Git installation.
ngrok config add-authtoken
33ITQCgKImLF4nbdvsTw7V63HMT_5aPX29cVDxqB3FesbAozp

Step 4: Configure GCP Credentials in Jenkins

1. Install Google Cloud SDK on Windows: <https://cloud.google.com/sdk/docs/install>
 2. Authenticate with GCP:
gcloud auth login
gcloud auth application-default login
 3. Create a Service Account in GCP with Storage Admin role and download the JSON key.
 4. In Jenkins: Manage Jenkins → Credentials → Global → Add Credentials → Secret file → Upload JSON key.
-

C:\ProgramData\Jenkins\.jenkins\secrets\initialAdminPassword

- localhost:8081

Hadoop HDFS Deta...

Prime Video: Search

OpenFlights: Airpor...

https://raw.githubu...

Viewing logs for Hi...

apache spark - Diff...

Examples of Respo...

xs

SparkyS

Getting Started

Getting Started

✖ Folders

🔄 Timestamper

🔄 Pipeline

🔄 Git

🔄 LDAP

✖ OWASP Markup Formatter

🔄 Workspace Cleanup

🔄 GitHub Branch Source

🔄 SSH Build Agents

🔄 Email Extension

✖ Build Timeout

🔄 Ant

🔄 Pipeline: GitHub Groovy Libraries

🔵 Matrix Authorization Strategy

🔄 Mailer

🔄 Credentials Binding

🔄 Gradle

🔄 Pipeline: Stage View

🔵 PAM Authentication

Folders

OWASP Markup Formatter

** Structs

** Token Macro

Build Timeout

** Pipeline: Step API

** Credentials

** Plain Credentials

** Trilead API

** - required dependency

Create Pipeline:

Enter an item name

» Required field



Freestyle project

This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.



Pipeline

Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.



Multi-configuration project

Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.



Folder

Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.



Multibranch Pipeline

Creates a set of Pipeline projects according to detected branches in one SCM repository.

OK Cancel

(?) Global Variables Reference

(?) Online Documentation

(?) Examples Reference

(?) IntelliJ IDEA GDSDL

checkout: Check out from version control

checkout ?

SCM

Git

Repositories ?

Repository URL ?

https://github.com/mohamedirfan/python.git

Credentials ?

- none -

+ Add

Name ?

git

Refspec ?

Steps

Sample Step

bat: Windows Batch Script

bat

Batch Script ?

```
python codewewd.py
```

Advanced...

Generate Pipeline Script

```
bat 'python codewewd.py'
```



Search (C

Dashboard > pipeline2 >

Status

</> Changes

▷ Build Now

⚙️ Configure

🗑️ Delete Pipeline

🔍 Full Stage View

✎️ Rename

❓ Pipeline Syntax

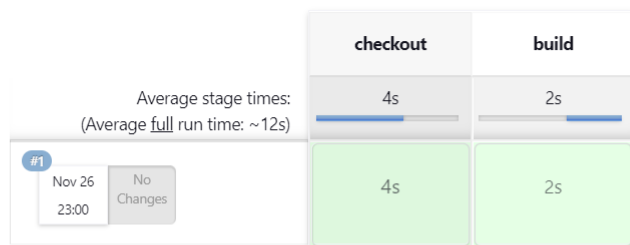
🔍 Build History **trend** ^

📡 Atom feed for all 📡 Atom feed for failures

Pipeline pipeline2

python script build and deploy

Stage View



Permalinks

- Last build (#1), 5 min 40 sec ago
- Last stable build (#1), 5 min 40 sec ago
- Last successful build (#1), 5 min 40 sec ago
- Last completed build (#1), 5 min 40 sec ago



Dashboard > pipeline2 > #1

Status



Build #1 (Nov 26, 2022, 11:00:03 PM)

Changes

Console Output

Edit Build Information

Delete build '#1'

Git Build Data

Restart from Stage

Replay

Pipeline Steps

Workspaces



Started by user [admin](#)



Revision: c21b97d04a92f675fb983144d4aae166dd57e8eb

Repository: <https://github.com/mohamedirfan/python.git>

- refs/remotes/git/master

```
pipeline {
```

```
  agent any
```

```
  stages {
```

```
    stage('checkout') {
```

```
      steps {
```

```
        echo "checkout is happening"
```

```
        checkout([$class: 'GitSCM', branches: [[name: '**/master']], extensions: [], userRemoteConfigs: [[name: 'git', url: 'https://github.com/mohamedirfan/python.git']]])
```

```
      }
```

```
    }
```

```
    stage('build') {
```

```
      steps {
```

```
        echo "build is happening"
```

```
        git 'https://github.com/mohamedirfan/python.git'
```

```
      }
```

```
    }
```

```
    stage('deploy') {
```

```
      steps {
```

```
        echo "deploy is happening"
```

```
        bat 'python codewewd.py'
```

```
      }
```

```
    }
```


Github CLI Commands:

1. Install Git in Linux:

```
sudo yum install git
```

2. Configure Git:

```
git config --global user.name "inceptez"
```

```
git config --global user.email "info@inceptez.com"
```

```
git config --list
```

3. Clone an existing repository from the Git:

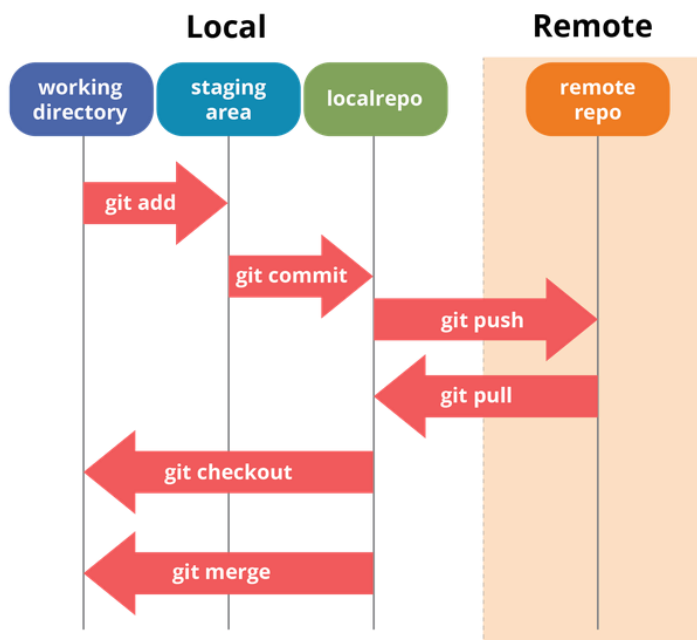
```
git clone https://github.com/incepteztechnologies/de2025.git
```

```
cd de2025
```

4. Set the existing remote repository URL

```
git remote set-url origin https://github.com/incepteztechnologies/de2025.git
```

5. Adding your code to Github



local code -> add -> stage -> commit -> local git repo

Create your code and place it inside the firstrepo folder

echo hello > ~/de2025/code1

Add the local file to the Stage

git add ~/de2025/code1.py

Commit the staged file to the local git repo

git commit -m "inital commit"

Push the local git file to the remote git

<https://docs.github.com/en/authentication/keeping-your-account-and-data-secure/creating-a-personal-access-token>

git push -u origin **main** -f

Authentication Key –

Username for 'https://github.com': mohamedirfan@gmail.com

ghp_WCh40Vspe4TjKHujeJQe0CR0p3NmHu3AP25t

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

Shows the current status of anything to commit

git status

Latest log of all activities happened in Git

git log

To know the remote repository

git remote -v

6. Pulling the code from Github

Goto github.com -> modify the file3

To pull all the changes from the remote to local directory only, not to my working directory.

git fetch

we dont see any changes until merge

cat /c/Users/moham/de2025/code1.py

Update the files from local to working directory

git merge origin/main

We can see changes now

cat /c/Users/moham/de2025/code1

Pull command basically runs 2 command, git fetch and git merge(first fetch to the local repo, do compare the code with the working directory then merge the local code with the working code).

git pull

List the files from Git Repo

git ls-files

Few Additional Commands:

Create a branch1

git branch branchwewd

git pull

switch to a different branch

git checkout branchwewd

To see which branch we are in

git branch

Checkout different versions

git checkout b9aed8bbeabaa41d5bc4a0b3b40f8d3863b0b727