



Estimated time needed: 40 minutes

In this lab you will explore Watson Studio

Objectives - After completing this lab, you will be able to:

- Use Watson Studio service
- Create project in Watson Studio
- Add an interactive python notebook to a project in Watson Studio

Pre-requisite

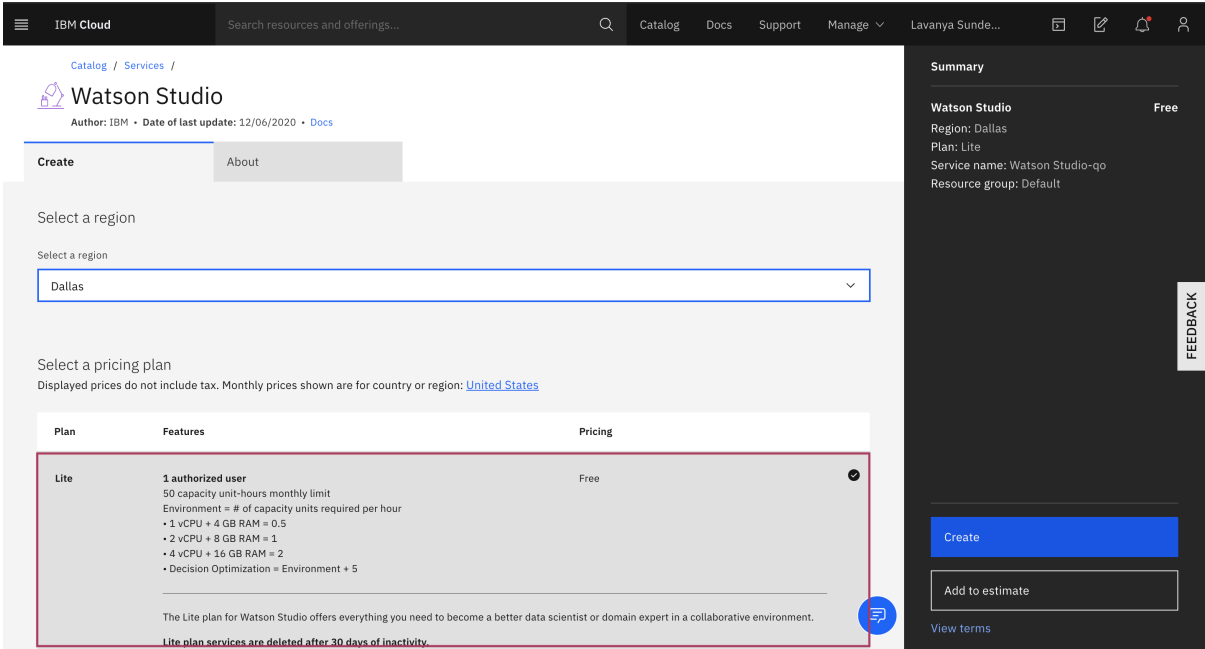
You need an IBM Cloud account to create a project in Watson Studio. If you don't have an account created already, click and open this [link](#) and follow the instructions, to create an IBM Cloud account.

Exercise - Create a project on Watson Studio

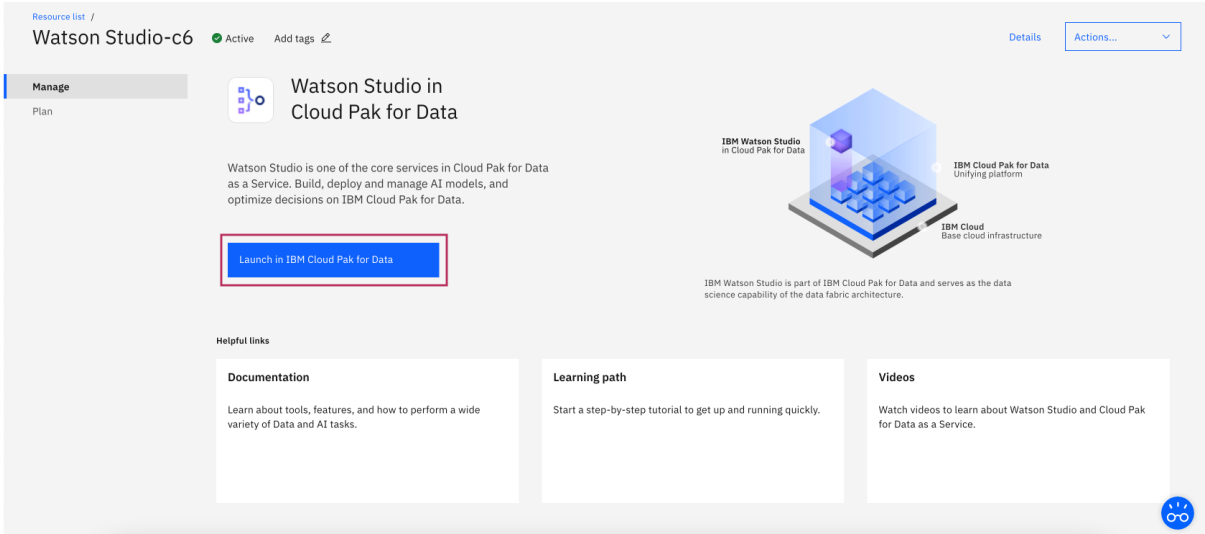
If you have not created a Watson service before proceed with Task 1, otherwise go to Task 2

Task 1: For New Users (with no Watson service):

1. [Click here](#) to go to the IBM Cloud Watson Studio page. To create a Watson service, choose a plan you want to use, click **Create**. In the image below, the *Lite* plan has been chosen.

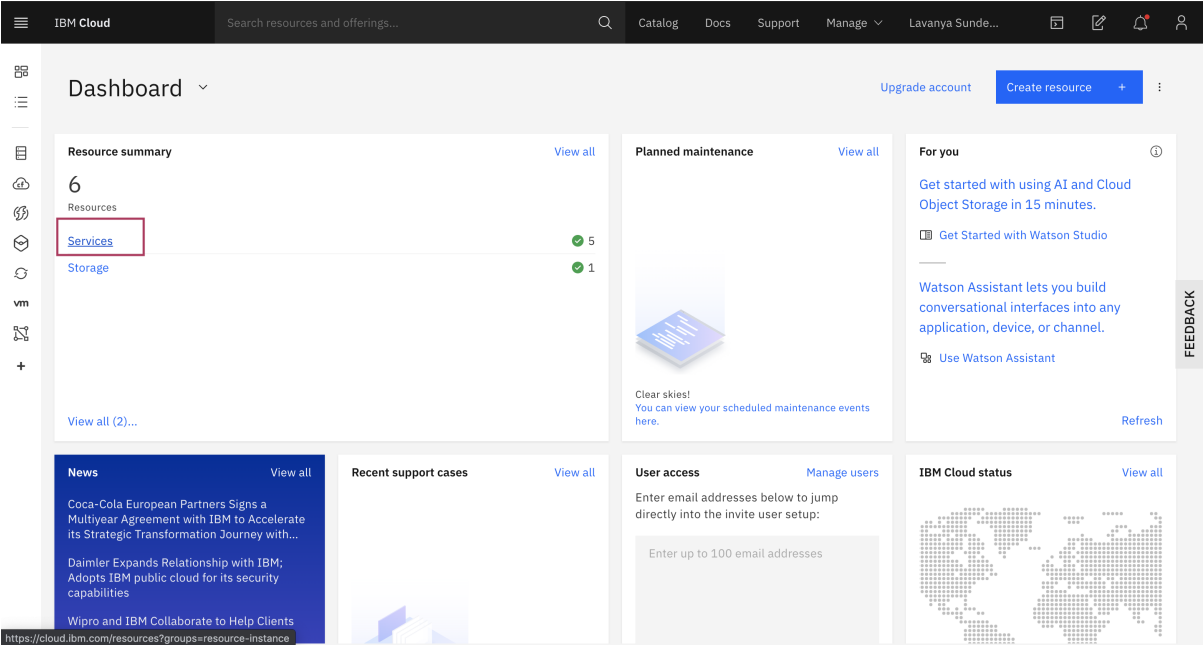


2. On the Watson Studio page, click on **Launch in IBM Cloud Pak for Data**.

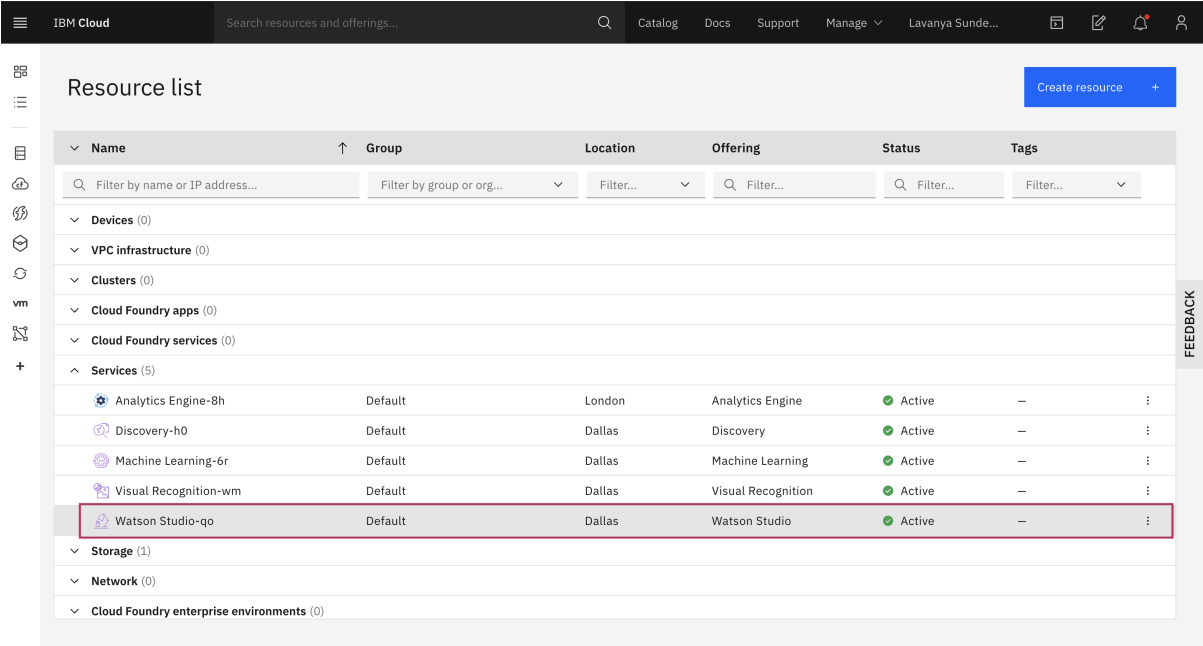


Task 2: For Existing Users (who already have Watson Service):

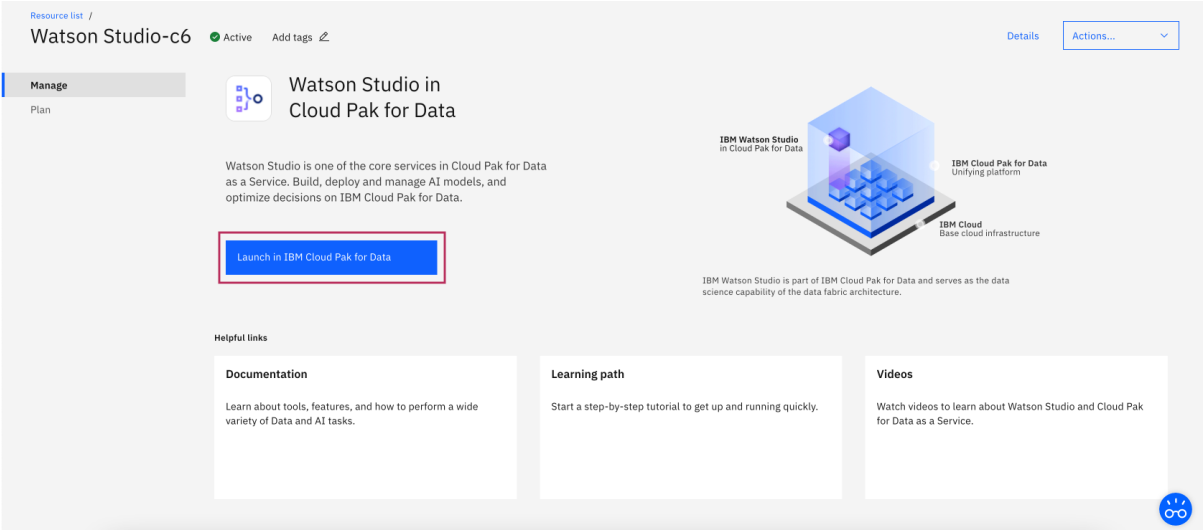
1. Go to the IBM Cloud Dashboard and click Services.



2. When you click on Services, all your existing services will be shown in the list. Click the Watson Studio service you created:

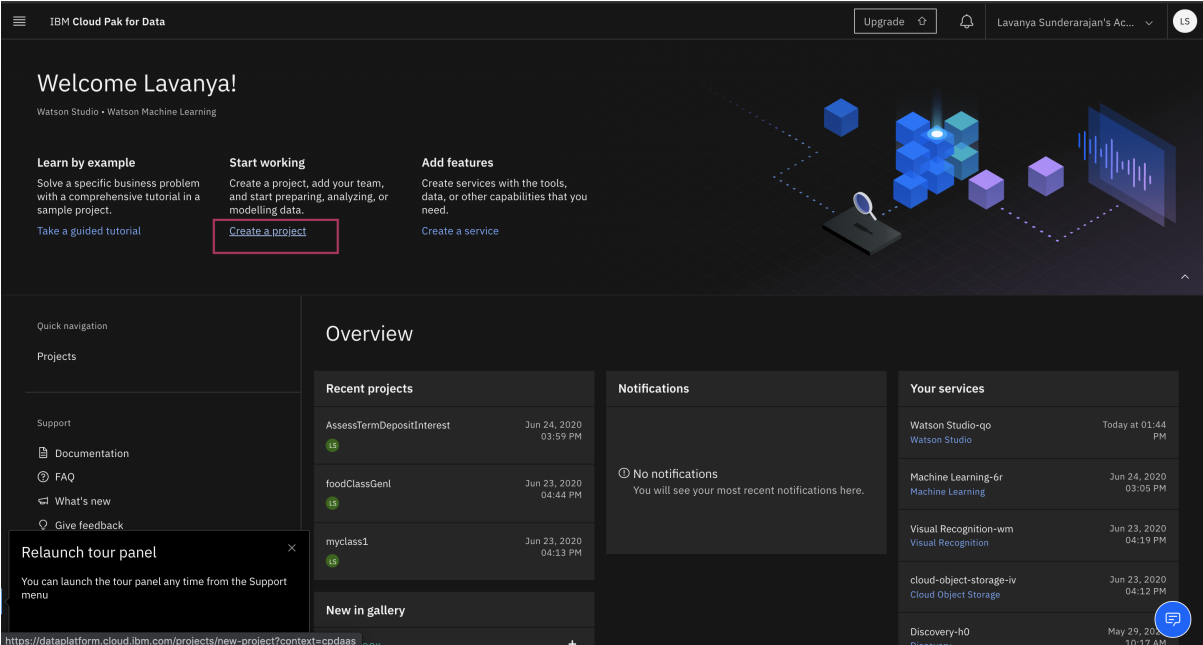


3. On the Watson Studio page, click on **Launch in IBM Cloud Pak for Data**.

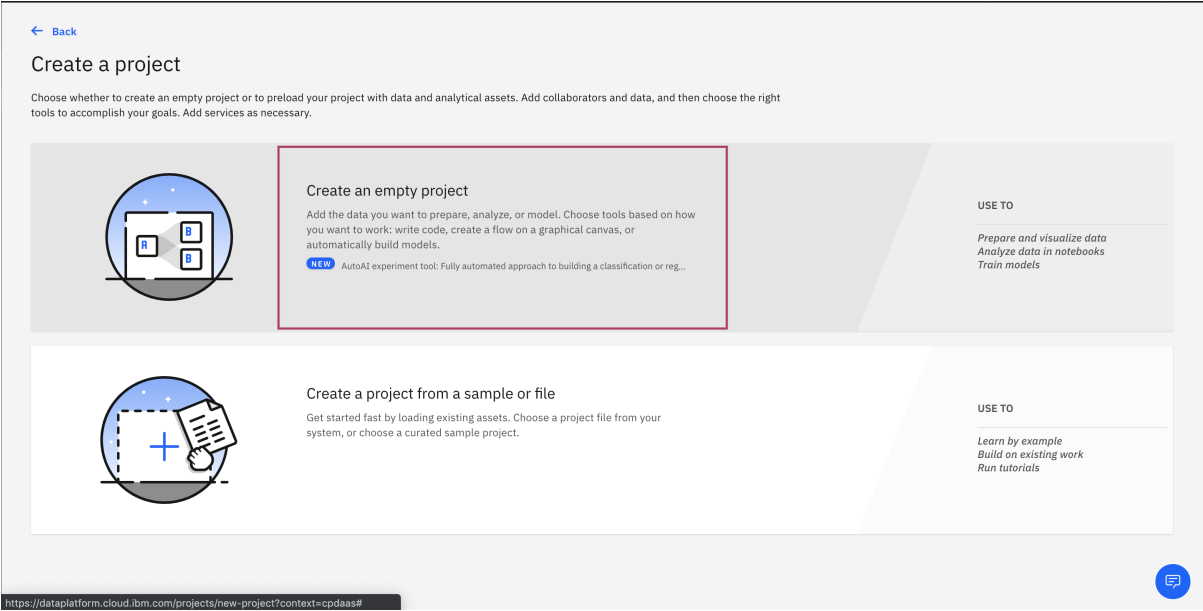


Task 3: Creating a Project

1. Click on **Create a project**



2. On the Create a project page, click **Create an empty project**



3. Provide a **Project Name** and **Description**, as shown below:

New project

Define project details

Name

Python Basics for Data Science Project

Description

This is the Python Basics for Data Science Project.

Choose project options

☐ Restrict who can be a collaborator

Project will include integration with [Cloud Object Storage](#) for storing project assets.

Define storage

1 Select storage service

Add

Add an object storage instance and then return to this page and click Refresh.

2 Refresh

4. You must also create storage for the project. Click **Add**

New project

Define project details

Name

Project name

Description

Project description

Choose project options

☐ Restrict who can be a collaborator

Project will include integration with [Cloud Object Storage](#) for storing project assets.

Define storage

1 Select storage service

Add

Add an object storage instance and then return to this page and click Refresh.

2 Refresh

5. On the Cloud Object Storage page, scroll down and then click **Create**.

IBM Watson Studio

Upgrade

Cloud Object Storage

ExistingNew

Cloud Object Storage

IBM Cloud Object Storage is a highly scalable cloud storage service, designed for high durability, resiliency and security. Store, manage and access your data via our self-service portal and RESTful APIs. Connect applications directly to Cloud Object Storage use other IBM Cloud Services with your data.

Features

Storage for the IBM Cloud

IBM Cloud Object Storage provides unstructured data storage for cloud applications. Libraries and SDKs support a common set of S3 API functions for connecting new applications to scalable cloud storage and integrating your data into other services on the IBM Cloud Platform as well as IBM Watson services. IBM Cloud Object Storage is available with Regional, Cross Region and single site resiliency options worldwide.

Built-in Aspera high-speed transfer

With IBM Cloud Object Storage Aspera high-speed data transfer, you can improve data transfer performance by quickly transferring data over long distances, and under various network conditions. It is natively integrated into Cloud Object Storage and there is no additional cost for uploading data.

Storage Classes and Archive Policy

Choose storage classes based on your usage patterns for active, less-active, and cold workloads with Standard, Vault, and Cold Vault respectively. Use Flex class for dynamic data access with usage patterns that are hard to predict. For rarely used data that requires long-term retention, simply set an Archive policy with our existing storage-class tiers allowing you to reduce costs even further with our lowest priced Archive storage.

Access and Key Management

IBM Identity and Access Management (IAM) policies allow for granular access control at the bucket level using role-based policies. Key Protect support allows customers to have their own managed encryption keys for higher level data security.

Pricing Plan: Monthly Process shown above reflect the: United States

PLAN	FEATURES	PRICING
<div><div><div>Life</div></div></div>	<p>1 COS Service Instance</p> <p>Storage up to 25 GB/mo. Up to 20,000 GET requests/mo. Up to 2,000 PUT requests/mo. Up to Data Retrieval 10 GB/mo. Up to 5GB Public Outbound Applies to aggregate total across all storage bucket classes</p>	Free

Standard

There is no minimum fee, so you pay only for what you use.

Expand each section to view details

Cancel

Create

6. In the Confirm Creation box, click **Confirm**.

×

Confirm Creation

Plan

Lite

Resource group

Default

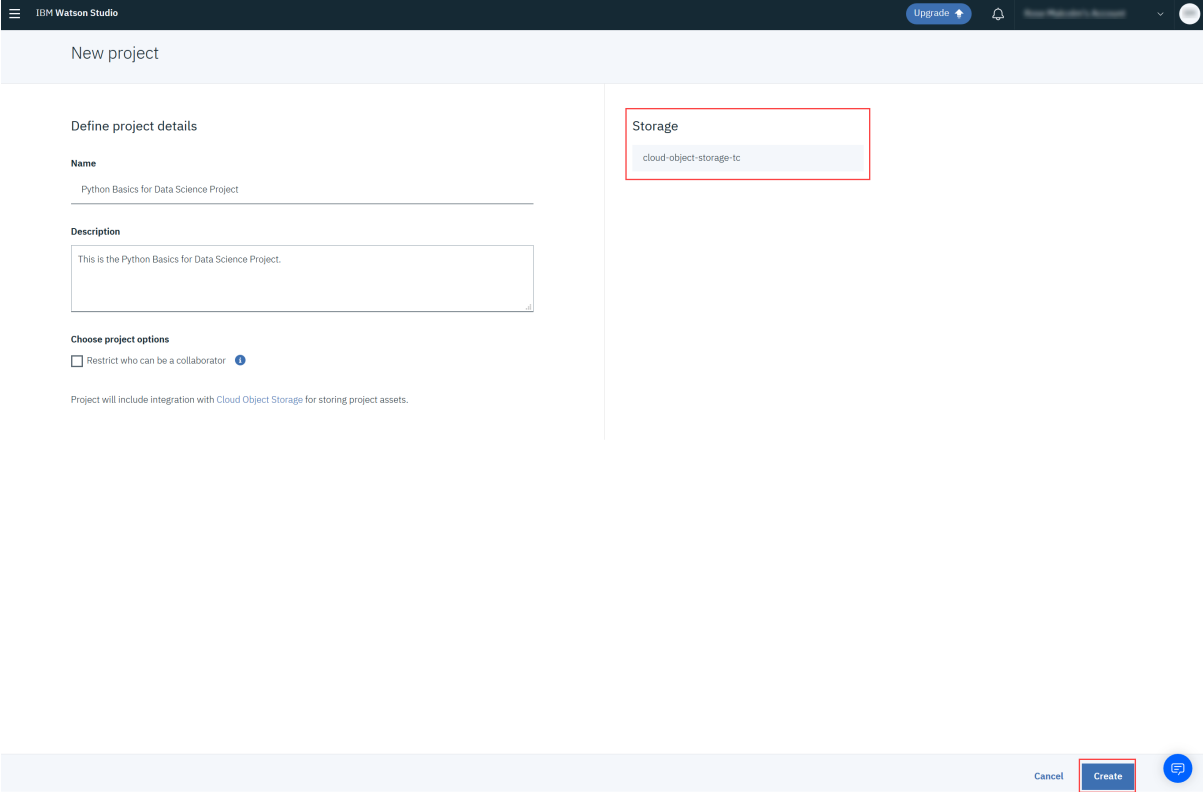
Service name

cloud-object-storage-ai

Cancel

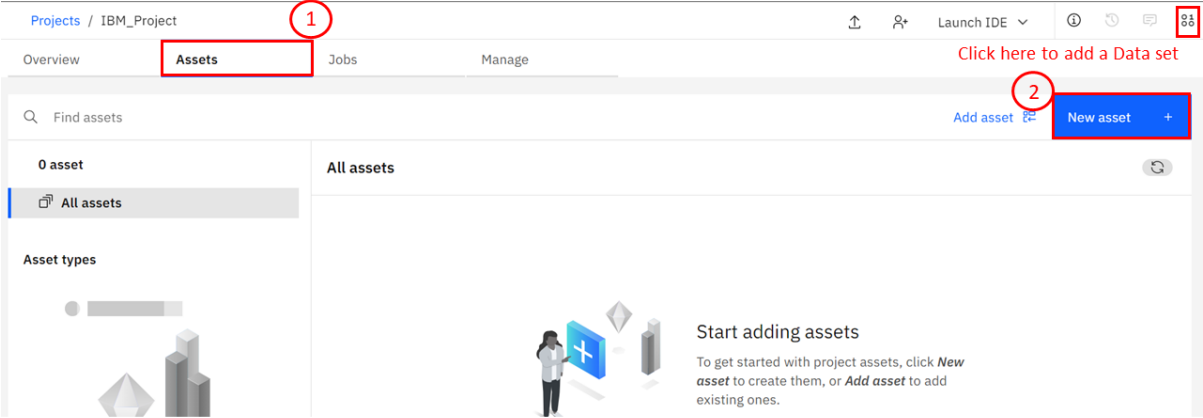
Confirm

7. On the New project page, note that the storage has been added, and then click Create.

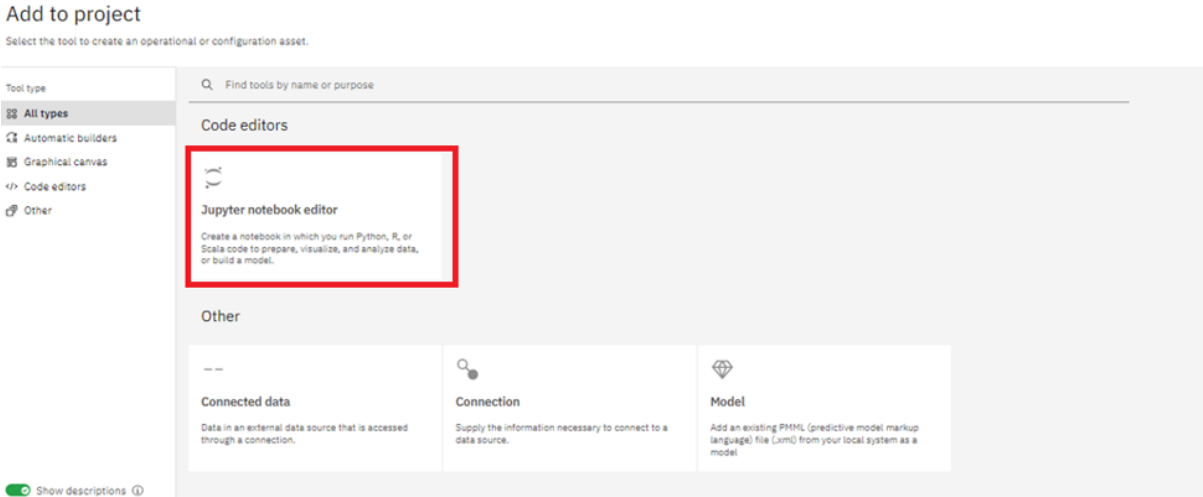


Task4: Adding a Notebook to the Project:

1. You need to add a Notebook to your project. Click on **Assets > New asset**.



2. Scroll down and select **Jupyter Notebook Editor**:



3. On the New Notebook page, enter a name for the notebook, and then click **From URL**.

Copy this [link](#).

4. Paste it into the **Notebook URL** box, and then click **Create Notebook**.

New notebook

Blank

From file

From URL

Name

Final_Assignment

Select runtime

IBM Runtime 22.1 on Python 3.9 XXS (1 vCPU 4 GB RAM)

Description (optional)

Type your description here

Notebook URL

https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-D/

The selected runtime has 1 vCPU and 4 GB RAM. It consumes 0.5 capacity units per hour. [Learn more](#) about capacity unit hours and Watson Studio pricing plans.

Cancel

Create

You will see this Notebook:



Introduction to Pandas in Python

Estaimted time needed: 15 minutes

Objectives

After compmlting this lab you will be able to:

- Use Pandas to access and view data

Table of Contents

- [About the Dataset](#)
- [Introduction of Pandas](#)
- [Viewing Data and Accessing Data](#)
- [Quiz on DataFrame](#)

Estimated time needed: 15 min

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Changelog

Date	Version	Changed by	Change Description
2022-04-04	2.3	Malika	Updated screenshot
2022-02-22	2.2	Hema	Updated screenshots
2020-11-18	2.1	Malika Singla	Updated the screenshot
2020-08-25	2.0	Lavanya	Migrated Lab to Markdown and added to course repo in GitLab

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