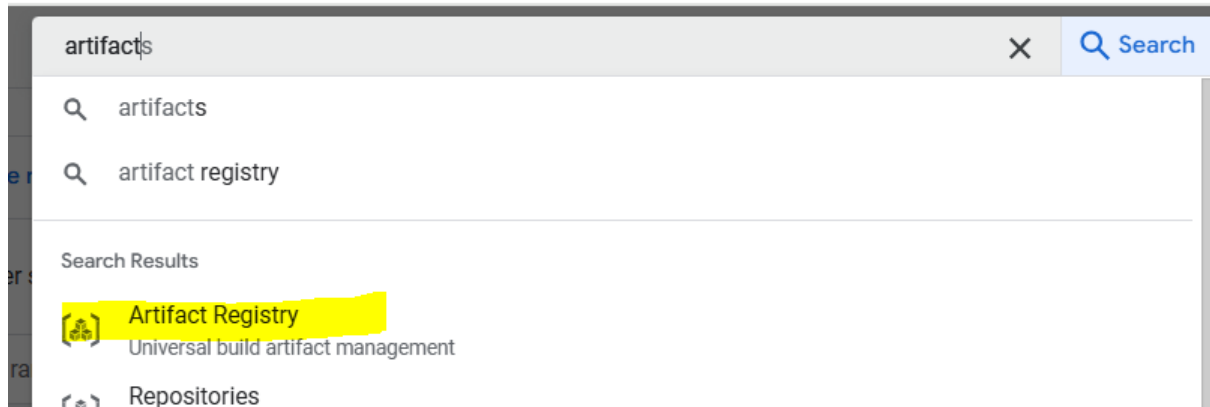In this lab we will create an Artifact Repository to store the the image and then we will use it in further labs for this module. Once created we will also upload an image to it.

On GCP, search Artifact and open Artifact Registry

Give it a name "my-repo", keep Format as Docker and Mode as Standard (Remote and Virtual are used mainly for hybrid scenarios or when we want to merge various repositories into a single one.)

Select your region and keep rest options as default

Create repository

Name *

my-repo

Format

- ⦿ Docker
- ◯ Maven
- ◯ npm
- ◯ Python
- ◯ Apt
- ◯ Yum
- ◯ Kubeflow Pipelines
- ◯ Go
- ◯ Generic PREVIEW

Mode

- ⦿ Standard
- ◯ Remote
- ◯ Virtual

Location type

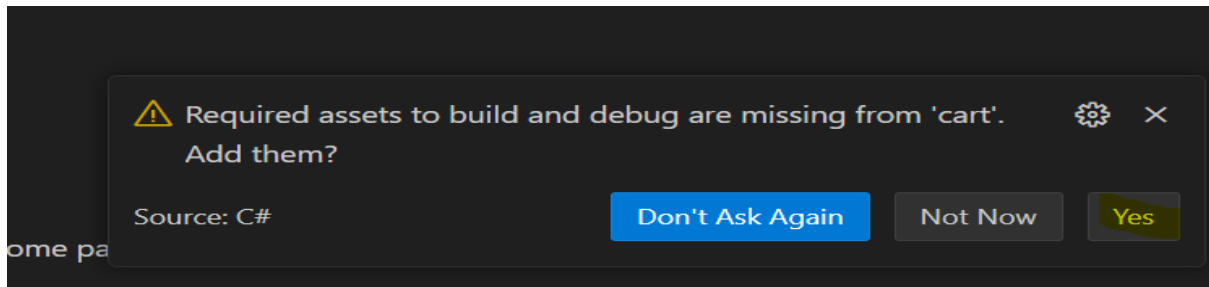- ⦿ Region
- ◯ Multi-region

Region *

us-central1 (Iowa)

Click Create

Extract cart baseline folder and copy cart folder from it to ReadIt app folder in the c drive

> This PC > Local Disk (C:) > Readit

| Name	Date mo
📁 cart	23-01-2(
📁 catalog	17-01-2(
📁 inventory	17-01-2(

Open cart folder in VScode from the readit app and if see pop up to add required debug, click yes

Open Dockerfile and review it. The Docker file specifies how exactly we want to build the Docker image for publishing.
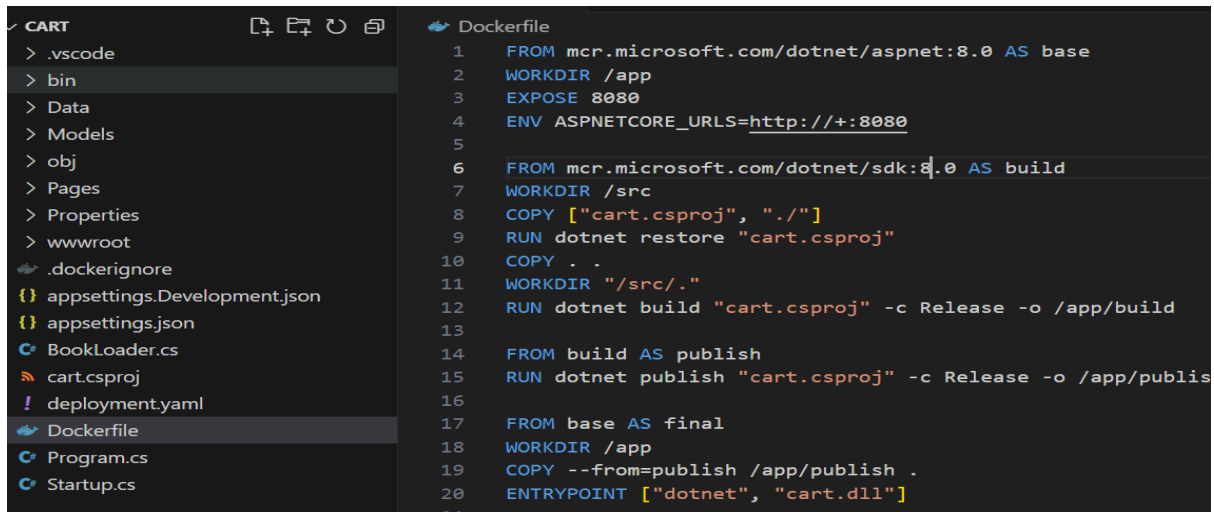
Hit f5 to ensure the code is running locally to our machine and this should open Cart webpage on browser
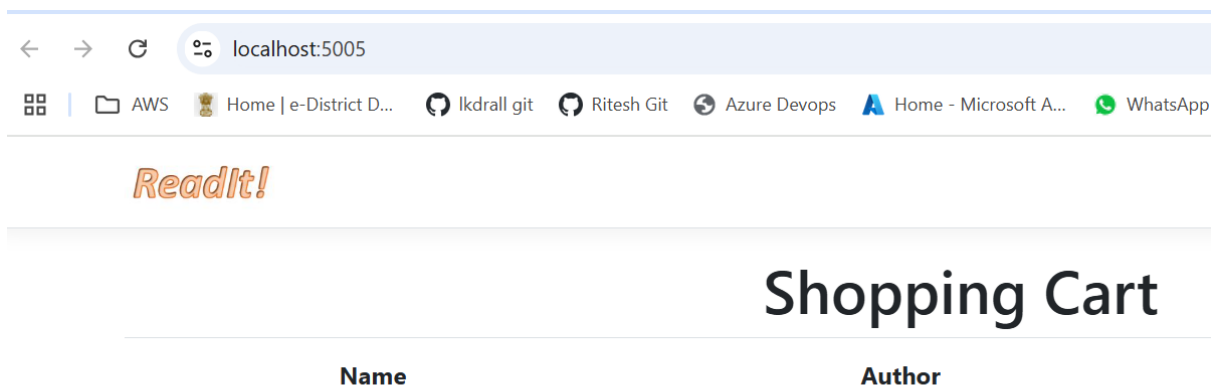
Now we need to build the Docker image from the code and push the image to the repository we created. Also, we do not need to install any local software for docker
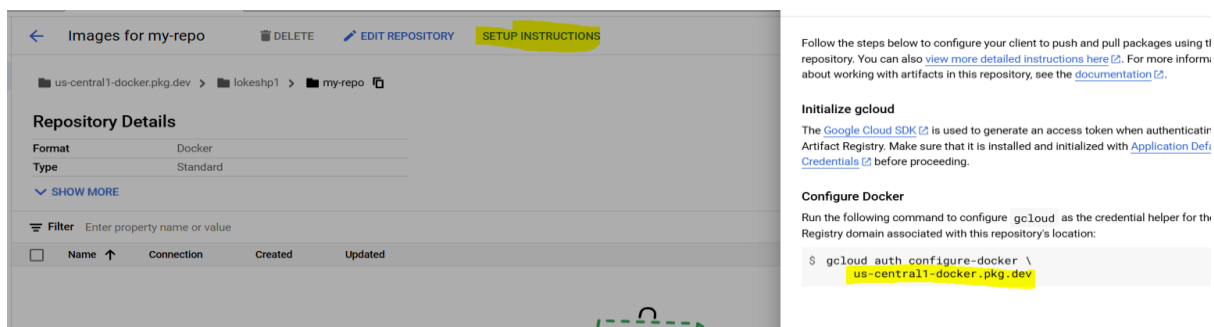
Now, first we will check our repository from VS Code, for this run the below command in VS Code and it should list our repository

gcloud artifacts repositories list

Now go to the GCP console, open my-repo registry and click the setup Instructions, and copy only the second line from there

In the below command, update the details as shown after. (Try to keep the region as us-central1 only as it has the best resources available)

gcloud builds submit --region=us-central1 --tag <ARTIFACT_REGISTRY_URL>/<PROJECT_ID>/my-repo/cart:v1

gcloud builds submit --region=us-central1 --tag us-central1-docker.pkg.dev/lokeshp1/my-repo/cart:v1

(Here, make sure to use the correct details for the project ID and repo name. In this command, v1 is the tag that we are going to use for the image and which can help to identify the image and its versions.)

Now, run the command in VS Code

Once completed, VS Code should give a success message

```
f5fe472da253: Pushed
v1: digest: sha256:7fb2d73f0fd90a6337f2ce9ce421b9d75b87e9f9cb04b3aae7b582e4fc69304b size: 1999
DONE
--------------------------------------------------------------------------------------------
ID                                        CREATE_TIME              DURATION  SOURCE
                                                        IMAGES                                  STATUS
a4028b1c-995e-4451-8574-df80875e4d80  2025-01-23T15:16:49+00:00  1M38S    gs://lokeshp1_cloudbuild/source/17376
45386.172989-8f47b00d324948f1b5e5ef5e3dc935d4.tgz  us-central1-docker.pkg.dev/lokeshp1/my-repo/cart:v1  SUCCESS
```

Now go to GCP console again and refresh page, under my-repo page, now it should show our docker image with cart1 name and docker symbol

Open the image, and check the tag for the version number that we gave

Now our docker image is ready to use, note image is build up of the code like in this case we are using cart code, and when we will use this image, it will directly have the code running which we will see in further sessions.