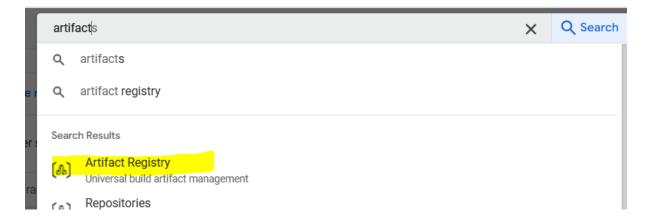
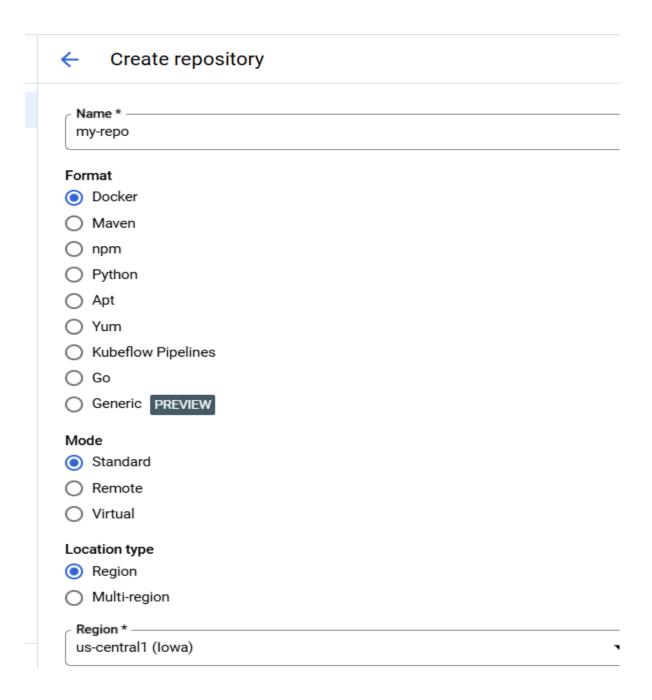
In this lab we will create an Artifact Repository to store the the image and then we will use it in further labs for this module. Once created we will also upload an image to it.

On GCP, search Artifact and open Artifact Registry



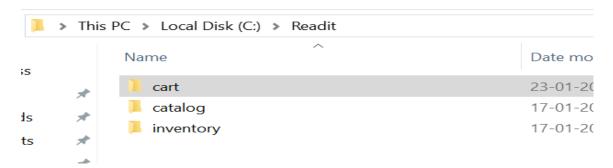
Give it a name "my-repo", keep Format as Docker and Mode as Standard (Remote and Virtual are used mainly for hybrid scenarios or when we want to merge various repositories into a single one.)

Select your region and keep rest options as default

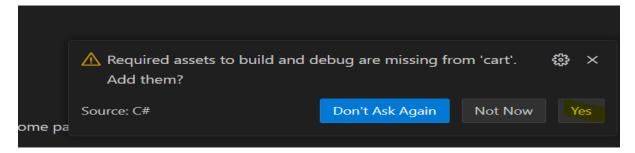


Click Create

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



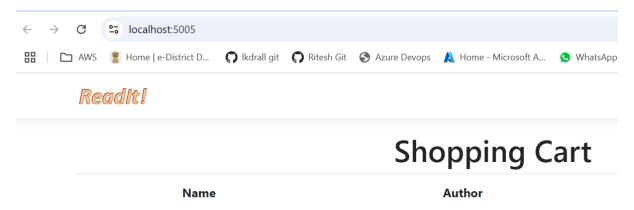
Open cart folder in VScode from the readit app and if see pop up to add required debug, click yes



Open Dockerfile and review it. The Docker file specifies how exactly we want to build the Docker image for publishing.

```
中に甘り自
CART
                                     Dockerfile
                                           FROM mcr.microsoft.com/dotnet/aspnet:8.0 AS base
> .vscode
                                           WORKDIR /app
                                           EXPOSE 8080
> Data
                                           ENV ASPNETCORE_URLS=http://+:8080
> Models
                                           FROM mcr.microsoft.com/dotnet/sdk:8.0 AS build
> Pages
                                           COPY ["cart.csproj", "./"]
RUN dotnet restore "cart.csproj"
> Properties
> wwwroot
.dockerignore
                                           WORKDIR "/src/."
{} appsettings.Development.json
                                           RUN dotnet build "cart.csproj" -c Release -o /app/build
{} appsettings.json
C BookLoader.cs
                                           FROM build AS publish
                                           RUN dotnet publish "cart.csproj" -c Release -o /app/publis
cart.csproj
! deployment.yaml
                                           FROM base AS final
Dockerfile
                                           WORKDIR /app
C* Program.cs
                                           COPY --from=publish /app/publish .
C Startup.cs
                                           ENTRYPOINT ["dotnet", "cart.dll"]
```

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

```
PS C:\Readit\cart> gcloud artifacts repositories list
Listing items under project lokeshp1, across all locations.

ARTIFACT_REGISTRY

REPOSITORY FORMAT MODE DESCRIPTION LOCATION LABELS ENCRYPTION CREATE_TIME

UPDATE_TIME SIZE (MB)

us.gcr.io DOCKER STANDARD_REPOSITORY us Google-managed key 2025-01-14T17:39:
30 2025-01-23T20:07:02 934.754

my-repo DOCKER STANDARD_REPOSITORY us-central1 Google-managed key 2025-01-23T20:12:
34 2025-01-23T20:12:34 0
```

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 uscentral 1 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

```
PS C:\Readit\cart>
PS C:\Readit\cart>
PS C:\Readit\cart>
PS C:\Readit\cart>
PS C:\Readit\cart> gcloud builds submit --region=us-central1 --tag us-central1-docker.pkg.dev/lokeshp1/my-repo/cart:v1
```

Once completed, VS Code should give a success message

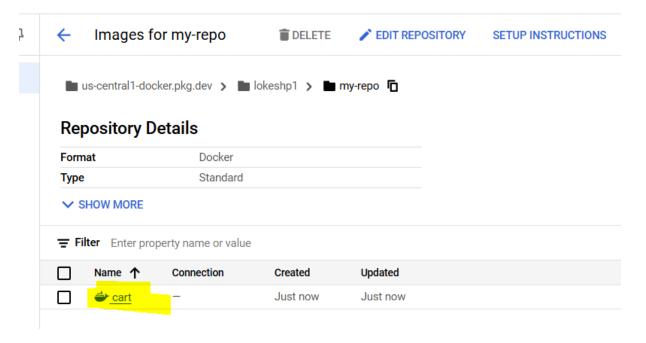
```
f5fe472da253: Pushed
v1: digest: sha256:7fb2d73f0fd90a6337f2ce9ce421b9d75b87e9f9cb04b3aae7b582e4fc69304b size: 1999

DONE

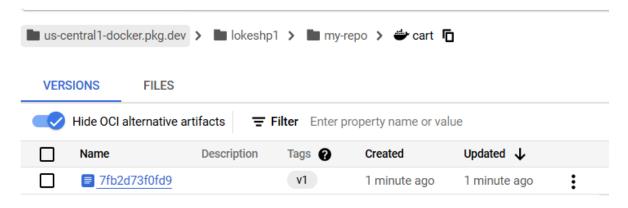
ID CREATE_TIME DURATION SOURCE

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.