Centro Universitario de Ciencias Exactas e Ingeniería

Computación Tolerante a Fallas

Ejemplo utilizando Docker.

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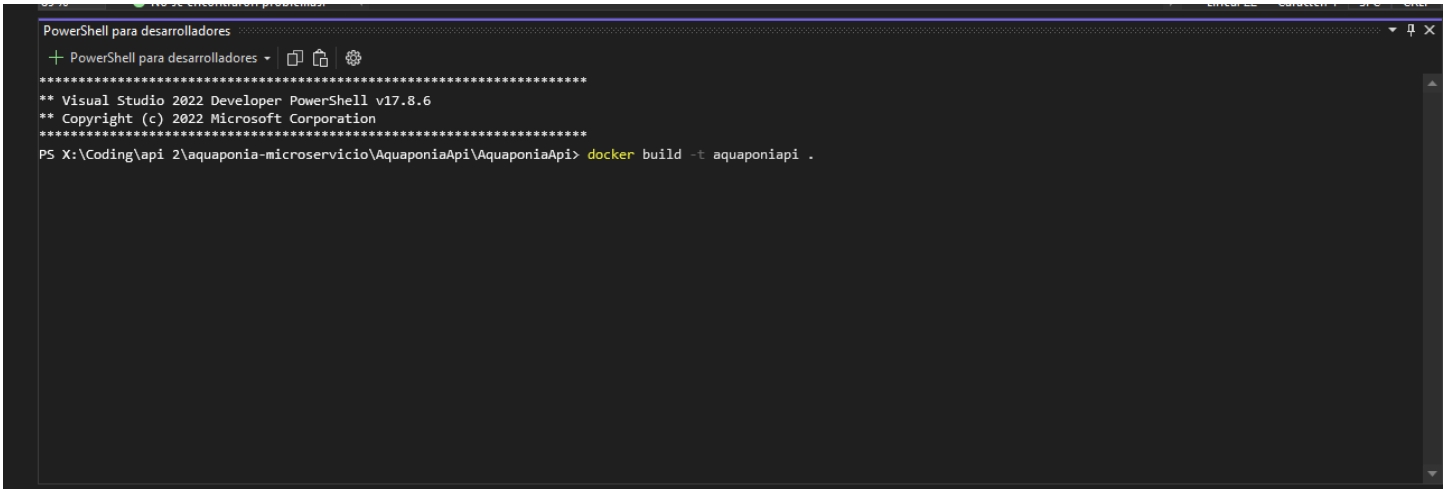
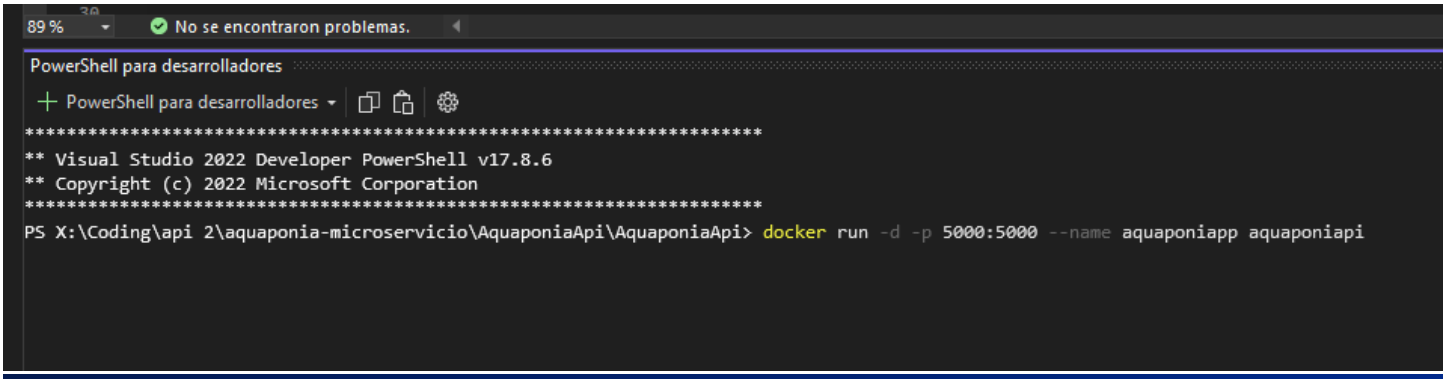
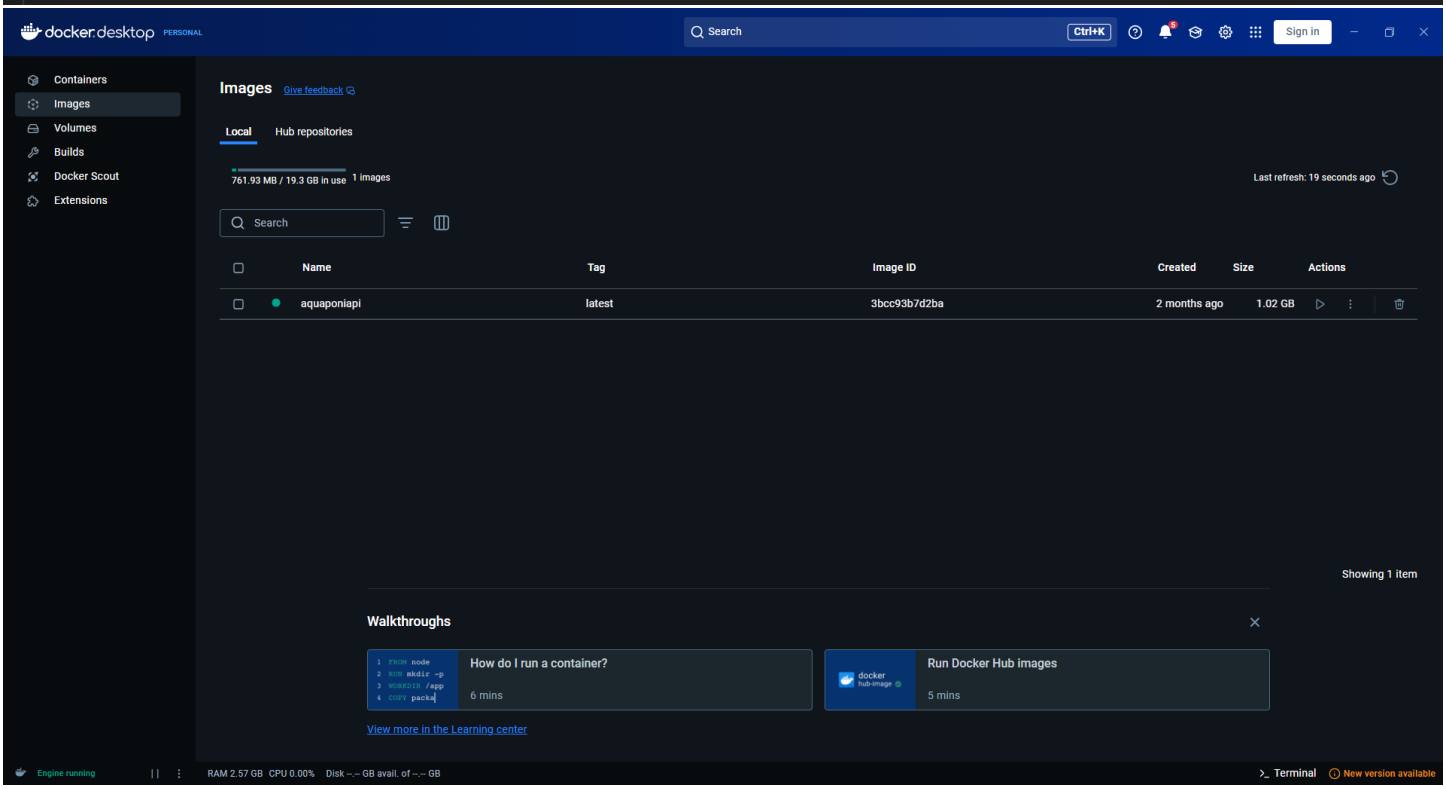
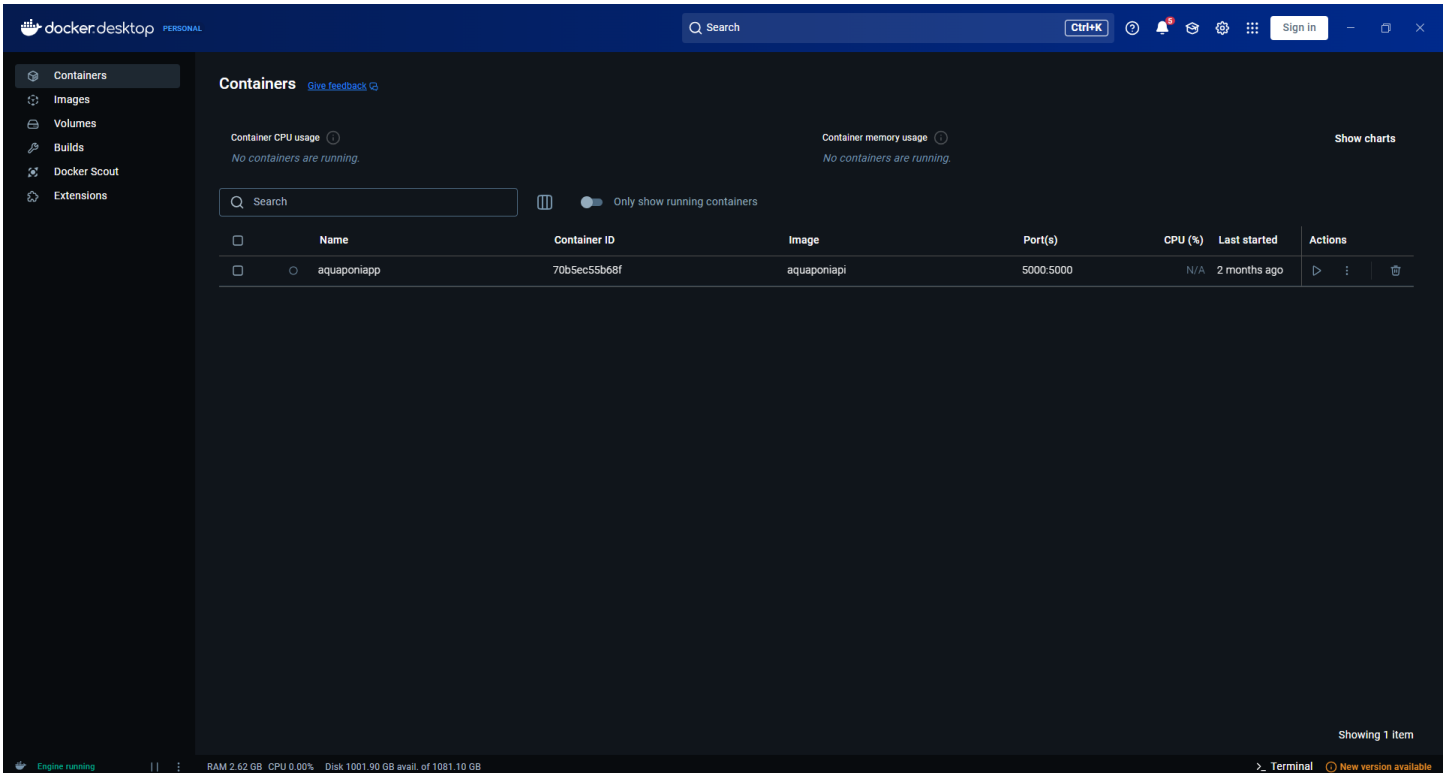
Objetivo:

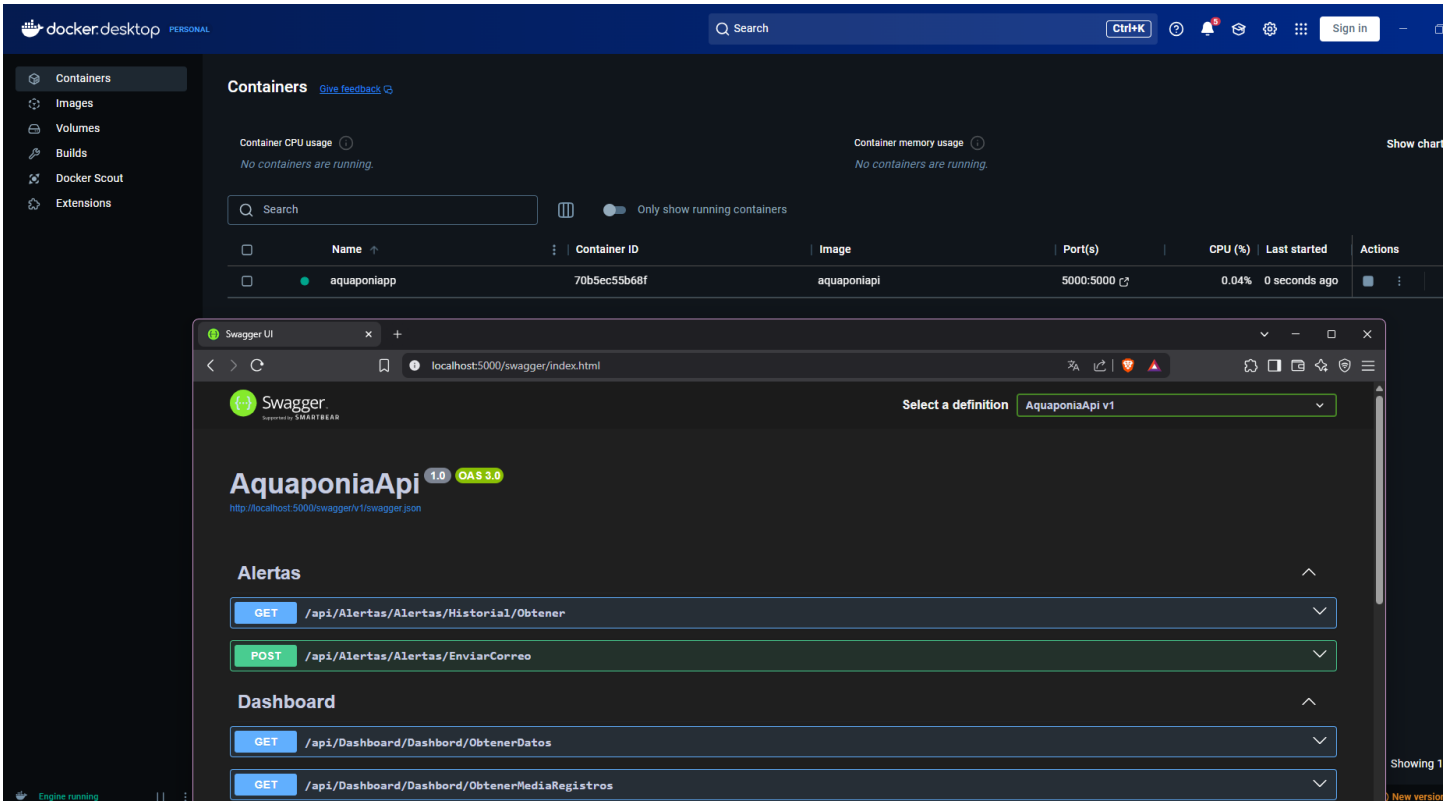
Desarrollo:




89 %
No se encontraron problemas.
PowerShell para desarrolladores
PowerShell para desarrolladores
****
** Visual Studio 2022 Developer PowerShell v17.8.6
** Copyright (c) 2022 Microsoft Corporation
****
PS X:\Coding\api 2\aquaponia-microservicio\AquaponiaApi\AquaponiaApi> docker run -d -p 5000:5000 --name aquaponiapp aquaponiapi


docker desktop
PERSONAL
Search
Ctrl+K
Sign in
Containers
Images
Volumes
Builds
Docker Scout
Extensions
Images
Give feedback
Local
Hub repositories
761.93 MB / 19.3 GB in use
1 images
Last refresh: 19 seconds ago
Search
Name
Tag
Image ID
Created
Size
Actions
aquaponiapi
latest
3bcc93b7d2ba
2 months ago
1.02 GB
Showing 1 item
Walkthroughs
How do I run a container?
6 mins
Run Docker Hub images
5 mins
View more in the Learning center
Engine running
RAM 2.57 GB CPU 0.00% Disk --.-- GB avail. of --.-- GB
Terminal
New version available

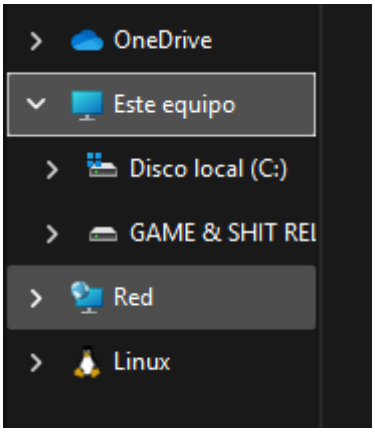




Etapa de compilaci□n con .NET SDK

```
FROM mcr.microsoft.com/dotnet/sdk:8.0 AS build-env

# Establecer directorio de trabajo
WORKDIR /app

# Copiar archivos del proyecto y restaurar dependencias
COPY *.csproj ./
RUN dotnet restore

# Copiar el resto de archivos y compilar la aplicaci□n
COPY . ./
RUN dotnet publish -c Release -o out

# ==============================
# Etapa final (Runtime) con .NET y Python
# ==============================
FROM mcr.microsoft.com/dotnet/aspnet:8.0 AS runtime-env
WORKDIR /app

# Instalar dependencias necesarias en una sola capa
RUN apt-get update && apt-get install -y --no-install-recommends \
    libexpat1 python3 python3-pip python3-venv && \
    python3 -m venv /opt/venv && \
    /opt/venv/bin/pip install --no-cache-dir scipy scikit-fuzzy requests networkx numpy opencv-python-headless Pillow packaging && \
    apt-get clean && rm -rf /var/lib/apt/lists/*

# Copiar la aplicaci□n publicada desde la imagen de compilaci□n
COPY --from=build-env /app/out .
```

```
# Copiar el script de Python
COPY --from=build-env /app/visionartificial.py .
COPY --from=build-env /app/controlador_difuso.py .
COPY --from=build-env /app/PerceptronNotificaciones.py .

# Configurar Python para que use el entorno virtual
ENV PATH="/opt/venv/bin:$PATH"

# Definir punto de entrada
ENTRYPOINT ["dotnet", "AquaponiaApi.dll"]
```



Conclusión:

Repositorio: