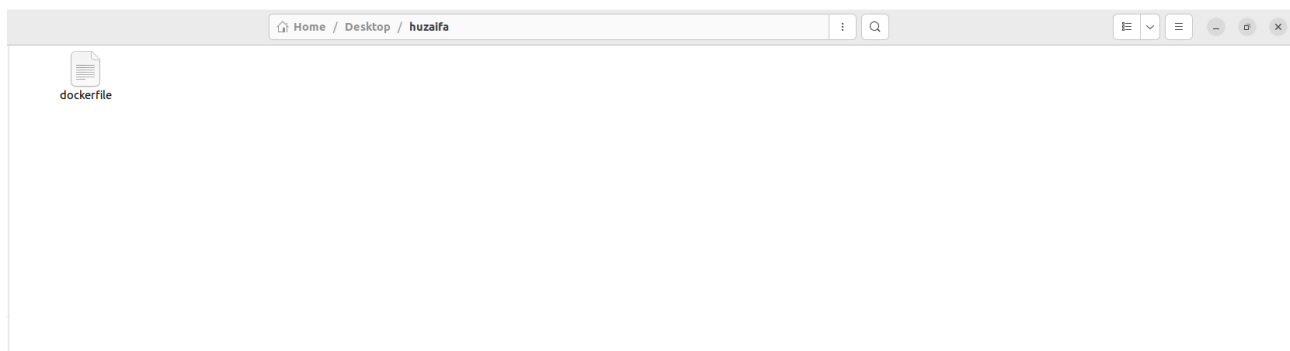
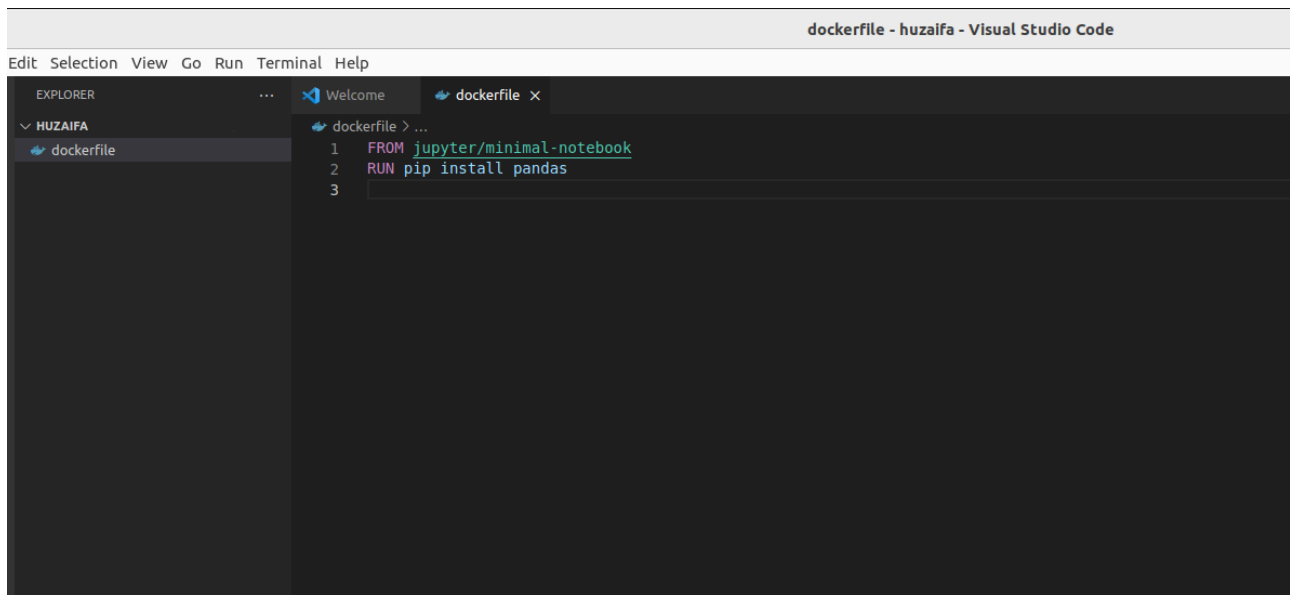


**Name:- Muhammad Huzaifa Waseem (2303-KHI-DEG-021)**  
**Pair Member:- Muhammad Faizan Rafique (2303.005.KHI.DEG)**

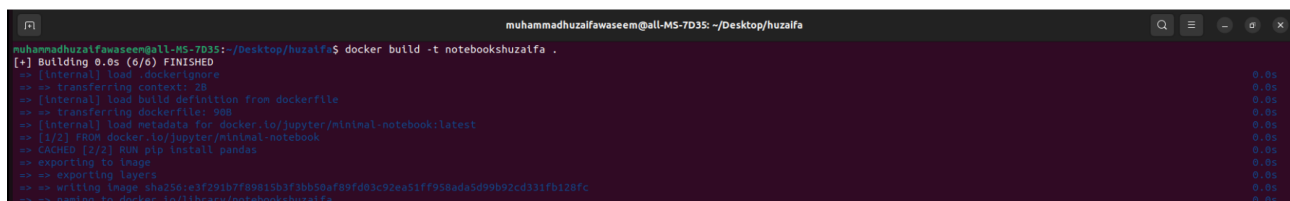
## UNIT 1.4

# ASSIGNMENT

- Build an image based on Jupyter Notebook (jupyter/minimal-notebook) with Pandas installed (pip install pandas)



- Create a container from this image and use the NOTEBOOK\_ARGS=--port=8889 environment variable to change the port Jupyter is exposed on



```
muhammadhuzalfawaseem@ali-M5-7D35: ~/Desktop/huzalfawaseem
==> exporting to image
==> exporting layers
==> writing image sha256:e3f291b7f89815b3f3b50af09f03c92ea51ff958ada5d990b2cd331fb128fc
==> pushing to docker://library/notebooks/huzalfawaseem
muhammadhuzalfawaseem@ali-M5-7D35: ~/Desktop/huzalfawaseem$ docker run -p 8889:8889 -e NOTEBOOK_ARGS="--port=8889" notebooks/huzalfawaseem
Entered start.sh with args: jupyter lab --port=8889
Executing the command: jupyter lab --port=8889
[I 2023-04-10 04:58:34.670 ServerApp] Package jupyterlab took 0.0000s to import
[I 2023-04-10 04:58:34.672 ServerApp] Package jupyter_server_fileid took 0.0013s to import
[I 2023-04-10 04:58:34.675 ServerApp] Package jupyter_server_terminals took 0.0026s to import
[I 2023-04-10 04:58:34.684 ServerApp] Package jupyter_server_ydoc took 0.0091s to import
[I 2023-04-10 04:58:34.684 ServerApp] Package nbclassic took 0.0000s to import
[W 2023-04-10 04:58:34.685 ServerApp] A '_jupyter_server_extension_points' function was not found in nbclassic. Instead, a '_jupyter_server_extension_paths' function was found and will be used for now. This function name will be deprecated in future releases of Jupyter Server.
[I 2023-04-10 04:58:34.685 ServerApp] Package notebook_shim took 0.0000s to import
[W 2023-04-10 04:58:34.686 ServerApp] A '_jupyter_server_extension_points' function was not found in notebook_shim. Instead, a '_jupyter_server_extension_paths' function was found and will be used for now. This function name will be deprecated in future releases of Jupyter Server.
[I 2023-04-10 04:58:34.688 ServerApp] jupyter_server_fileid | extension was successfully linked.
[I 2023-04-10 04:58:34.690 ServerApp] jupyter_server_terminals | extension was successfully linked.
[I 2023-04-10 04:58:34.692 ServerApp] jupyter_server_ydoc | extension was successfully linked.
[I 2023-04-10 04:58:34.695 ServerApp] jupyterlab | extension was successfully linked.
[W 2023-04-10 04:58:34.696 NotebookApp] 'ip' has moved from NotebookApp to ServerApp. This config will be passed to ServerApp. Be sure to update your config before our next release.
[W 2023-04-10 04:58:34.698 ServerApp] nbclassic | extension was successfully linked.
[I 2023-04-10 04:58:34.699 ServerApp] Writing Jupyter server cookie secret to /home/jovyan/.local/share/jupyter/runtime/jupyter_cookie_secret
[I 2023-04-10 04:58:34.802 ServerApp] notebook_shim | extension was successfully linked.
[I 2023-04-10 04:58:34.852 ServerApp] notebook_shim | extension was successfully loaded.
[I 2023-04-10 04:58:34.852 FileIdExtension] Configured File ID manager: ArbitraryFileIDManager
[I 2023-04-10 04:58:34.852 FileIdExtension] ArbitraryFileIDManager : Configured root dir: /home/jovyan
[I 2023-04-10 04:58:34.852 FileIdExtension] ArbitraryFileIDManager : Configured database path: /home/jovyan/.local/share/jupyter/file_id_manager.db
[I 2023-04-10 04:58:34.853 FileIdExtension] ArbitraryFileIDManager : Successfully connected to database file.
[I 2023-04-10 04:58:34.858 FileIdExtension] Attached event listeners.
[I 2023-04-10 04:58:34.858 ServerApp] jupyter_server_fileid | extension was successfully loaded.
[I 2023-04-10 04:58:34.859 ServerApp] jupyter_server_terminals | extension was successfully loaded.
[I 2023-04-10 04:58:34.859 ServerApp] jupyter_server_ydoc | extension was successfully loaded.
[I 2023-04-10 04:58:34.859 LabApp] JupyterLab application directory is /opt/conda/share/jupyter/lab
[I 2023-04-10 04:58:34.861 ServerApp] jupyterlab | extension was successfully loaded.
[I 2023-04-10 04:58:34.864 ServerApp] nbclassic | extension was successfully loaded.
[I 2023-04-10 04:58:34.864 ServerApp] Serving notebooks from local directory: /home/jovyan
[I 2023-04-10 04:58:34.864 ServerApp] Jupyter Server 2.5.0 is running at:
[I 2023-04-10 04:58:34.864 ServerApp] http://127.0.0.1:8889/lab?token=adba9e1f817d653cfdbedb78c33646ffe7dbdbec83839d7a
[I 2023-04-10 04:58:34.864 ServerApp] http://127.0.0.1:8889/lab?token=adba9e1f817d653cfdbedb78c33646ffe7dbdbec83839d7a
[I 2023-04-10 04:58:34.864 ServerApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 2023-04-10 04:58:34.866 ServerApp]

To access the server, open this file in a browser:
file:///home/jovyan/.local/share/jupyter/runtime/jpserver-7-open.html
Or copy and paste one of these URLs:
http://127.0.0.1:8889/lab?token=adba9e1f817d653cfdbedb78c33646ffe7dbdbec83839d7a
http://127.0.0.1:8889/lab?token=adba9e1f817d653cfdbedb78c33646ffe7dbdbec83839d7a
[I 2023-04-10 04:58:38.079 LabApp] Generating new user for token-authenticated request: 116e2051b37341a287e9550da2a5d0b
[I 2023-04-10 04:58:40.248 LabApp] Build is up to date
```

●Verify you can access it on port 8889 and that Pandas is installed (type import pandas in a notebook).

