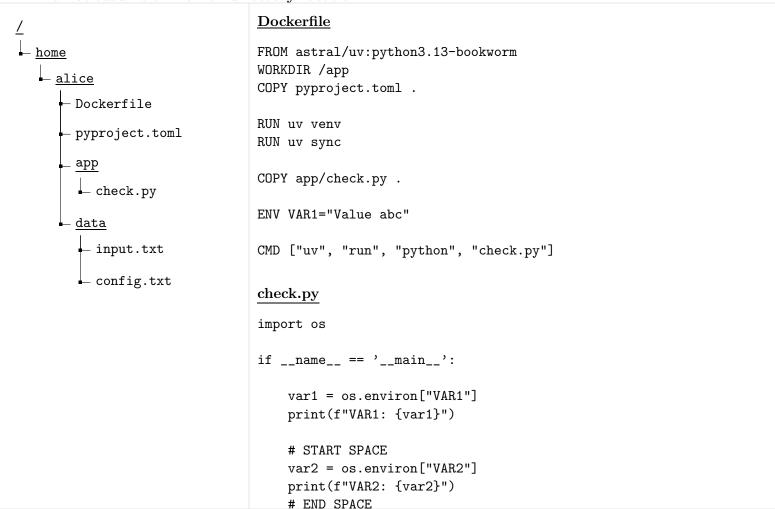**Instructions:** Please answer the following questions making sure to write your answers legibly. If you run out of room or need to re-write use the back of this quiz. The graphic denotes the file system on a machine and the Dockerfile in /home/alice.

- <u>Directories</u> are underlined. Any other object should be considered a file.

- **For each question assume that you are starting from the original file system**. Ignore any changes to the file system you made in previous questions.

- You will be graded for being unnecessarily complex in your solutions.

- Any syntax not covered in class will be tested <u>on my machine</u> for applicability.

- **Do not assume a "home" directory location.**

```
/
└── home
    └── alice
        ├── Dockerfile
        ├── pyproject.toml
        ├── app
        │   └── check.py
        └── data
            ├── input.txt
            └── config.txt
```

Dockerfile

```
FROM astral/uv:python3.13-bookworm
WORKDIR /app
COPY pyproject.toml .

RUN uv venv
RUN uv sync

COPY app/check.py .

ENV VAR1="Value abc"

CMD ["uv", "run", "python", "check.py"]
```

check.py

```python
import os

if __name__ == '__main__':

    var1 = os.environ["VAR1"]
    print(f"VAR1: {var1}")

    # START SPACE
    var2 = os.environ["VAR2"]
    print(f"VAR2: {var2}")
    # END SPACE
```

1. We run the following commands from the /home/alice directory:

   ```
   docker build . -t quiz2
   docker run -e VAR2="RunValue" quiz2
   ```

   What will be printed to the screen (by the python command) when these commands execute? Write the exact output.

2. Which (VAR1 or VAR2) changes only when we build the container?

3. The lines labeled "# START SPACE" and "# END SPACE" in check.py print the environment variables. Rewrite these lines so that if VAR2 is not set, it prints "VAR2 is not set".

4. We want to copy input.txt from the data directory into the container at build time. Add a line to the Dockerfile that will copy this file to /app/input.txt inside the container. Use a relative path and specify <u>where</u> in the Dockerfile this line should be added.

5. After the container is built using the Dockerfile above, what is the full path where check.py is located inside the container?