```Dockerfile

# Set the base image for subsequent instructions

FROM ubuntu:latest

# Add metadata to the image

LABEL maintainer="Your Name <your.email@example.com>"

LABEL description="Dockerfile demonstrating each Dockerfile directive"

# Set build-time variables

ARG APP\_VERSION=1.0

# Set the default shell for commands

SHELL ["/bin/bash", "-c"]

# Create a new build stage from a base image

FROM python:3.9-slim AS builder

# Set the working directory for subsequent instructions

WORKDIR /app

# Copy files and directories from the host

COPY . .

# Execute build commands

RUN apt-get update && \

apt-get install -y git && \

git clone https://github.com/example/repo.git

# Set environment variables

ENV APP\_HOME=/app

ENV PORT=8080

# Describe which ports your application is listening on

EXPOSE $PORT

# Check a container's health on startup

HEALTHCHECK --interval=30s --timeout=5s --retries=3 CMD curl -f http://localhost:$PORT/ || exit 1

# Specify default executable

ENTRYPOINT ["./entrypoint.sh"]

# Specify default commands

CMD ["./run.sh"]

# Add metadata to an image

LABEL version="$APP\_VERSION"

# Specify instructions for when the image is used in a build

ONBUILD RUN echo "Child image built with parent image"

# Specify the system call signal for exiting a container

STOPSIGNAL SIGTERM

# Set user and group ID

USER nobody

# Create volume mounts

VOLUME /data

# Change working directory

WORKDIR /data

```

Explanation:

1. \*\*FROM\*\*: Specifies the base image for subsequent instructions.

2. \*\*LABEL\*\*: Adds metadata to the image, such as the maintainer and description.

3. \*\*ARG\*\*: Sets build-time variables. In this example, `APP\_VERSION` is set to `1.0`.

4. \*\*SHELL\*\*: Sets the default shell for commands.

5. \*\*FROM\*\*: Creates a new build stage from a base image. This is useful for multi-stage builds.

6. \*\*WORKDIR\*\*: Sets the working directory for subsequent instructions.

7. \*\*COPY\*\*: Copies files and directories from the host into the container.

8. \*\*RUN\*\*: Executes build commands.

9. \*\*ENV\*\*: Sets environment variables.

10. \*\*EXPOSE\*\*: Describes which ports your application is listening on.

11. \*\*HEALTHCHECK\*\*: Checks a container's health on startup.

12. \*\*ENTRYPOINT\*\*: Specifies the default executable.

13. \*\*CMD\*\*: Specifies default commands.

14. \*\*ONBUILD\*\*: Specifies instructions for when the image is used in a build.

15. \*\*STOPSIGNAL\*\*: Specifies the system call signal for exiting a container.

16. \*\*USER\*\*: Sets user and group ID.

17. \*\*VOLUME\*\*: Creates volume mounts.

18. \*\*WORKDIR\*\*: Changes the working directory.