To run the command docker build -t docker-python-helloworld:latest, you need to have the following pre-installed software and configurations:

**1. Docker**

**Docker** is required to build, run, and manage containers. It must be installed and properly configured on your machine.

**Installation Steps:**

* **Windows:** You can download Docker Desktop from Docker's official website.
* **Mac:** Similar to Windows, download Docker Desktop from Docker's official website.
* **Linux:** Use your distribution's package manager. For example, on Ubuntu, you can use:

bash

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sudo apt-get update

sudo apt-get install docker-ce docker-ce-cli containerd.io

**2. Docker Daemon Running**

Ensure that the Docker daemon is running. This is necessary for Docker commands to work.

**Start Docker Daemon:**

* **Windows/Mac:** Docker Desktop should automatically start the daemon. You can check its status from the Docker Desktop application.
* **Linux:** You may need to start the Docker service manually:

bash

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sudo systemctl start docker

sudo systemctl enable docker # Optional: To start Docker on boot

**3. Dockerfile**

A Dockerfile must be present in the directory where you run the docker build command. This file contains the instructions to build the Docker image.

**Example of a simple Dockerfile:**

Dockerfile

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# Use an official Python runtime as a parent image

FROM python:3.9-slim

# Set the working directory in the container

WORKDIR /app

# Copy the current directory contents into the container at /app

COPY . /app

# Install any needed packages specified in requirements.txt

RUN pip install --no-cache-dir -r requirements.txt

# Make port 80 available to the world outside this container

EXPOSE 80

# Run app.py when the container launches

CMD ["python", "app.py"]

**4. Internet Connection**

An active internet connection may be required to download the base images and dependencies during the build process.

**Summary**

To sum up, the following are required:

1. **Docker** installed and configured.
2. **Docker Daemon** running.
3. A **Dockerfile** present in the directory where you execute the docker build command.
4. **Internet Connection** (to fetch dependencies).

After ensuring these prerequisites are met, you can run the command:

bash

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docker build -t docker-python-helloworld:latest .

This will build a Docker image tagged as docker-python-helloworld with the tag latest based on the instructions in your Dockerfile.