User Manual

Cloud Project System

Introduction

The Cloud Project System is a graphical user interface (GUI) application that facilitates Docker and VirtualBox operations. It is designed to streamline the management of Docker images, containers, and VirtualBox virtual machines. This user manual provides detailed instructions on how to use each feature of the system.

1. Docker Management

1.1 Create Dockerfile

1. Click on the "Create Dockerfile" button.
2. Choose either Python or Java for the Dockerfile.
3. Enter the directory to save the Dockerfile.
4. Click "OK" to create the Dockerfile.

1.2 Build Docker Image

1. Click on the "Build Docker Image" button.
2. Select the directory containing the Dockerfile.
3. Enter the image name and tag.
4. Click "OK" to initiate the image build.

1.3 Create Container

1. Click on the "Create Container" button.
2. Enter the image name and container name.
3. Click "OK" to create the container.

1.4 List Docker Images

1. Click on the "List Docker Images" button.
2. View the displayed list of Docker images.

1.5 List Running Containers

1. Click on the "List Running Containers" button.
2. View the list of running containers.
3. Click "Stop" to stop a specific container.

1.6 Stop Container

1. Click on the "Stop Container" button.
2. Enter the ID of the container to stop.
3. Click "OK" to stop the container.

2. Docker Image Search

2.1 Search on DockerHub

1. Enter the image name in the provided entry.
2. Click "Search on DockerHub" to find matching images.
3. Click "Pull" to download a selected image.

2.2 Search Local Images

1. Enter the image name in the provided entry.
2. Click "Search Image (Local Storage)" to find local images.

2.3 Download/Pull Image

1. Enter the image name in the provided entry.
2. Click "Download/Pull Image" to pull the selected image from DockerHub.

3. Virtual Machine Management

3.1 Create Virtual Machine (Interactive)

1. Click on the "Create Virtual Machine" button.
2. Enter the VM name, memory size, and disk size.
3. Click "OK" to create the virtual machine interactively.

3.2 Create Virtual Machine (Config File)

1. Run the script with a configuration file:
    - bash
    - Copy code
    - python create_vm.py [config_file]
    - The config file should contain name, memory, and disk_size parameters.

4. Execute Python Files

4.1 Execute Python File

1. Click on the respective buttons to execute Python files.
2. "Create VM" executes "create_vm.py".
3. "Build & Run" executes the main application.
4. "Search & Pull" executes "images.py".

5. User Interface

5.1 Main User Interface

1. The main window displays available options.
2. Click on buttons to perform specific actions.
3. The background image adds visual appeal.

Note: Ensure that Docker and VirtualBox are installed on your system before using the Cloud Project System.