

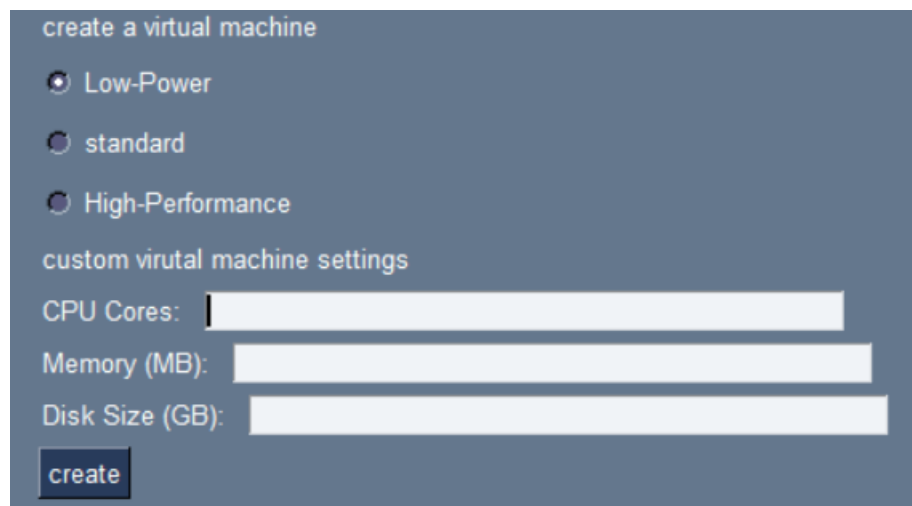
# CSCi363 Course project

## Cloud management system.

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## Cloud Management System User Guide

### Creating Virtual Machines (VMs)



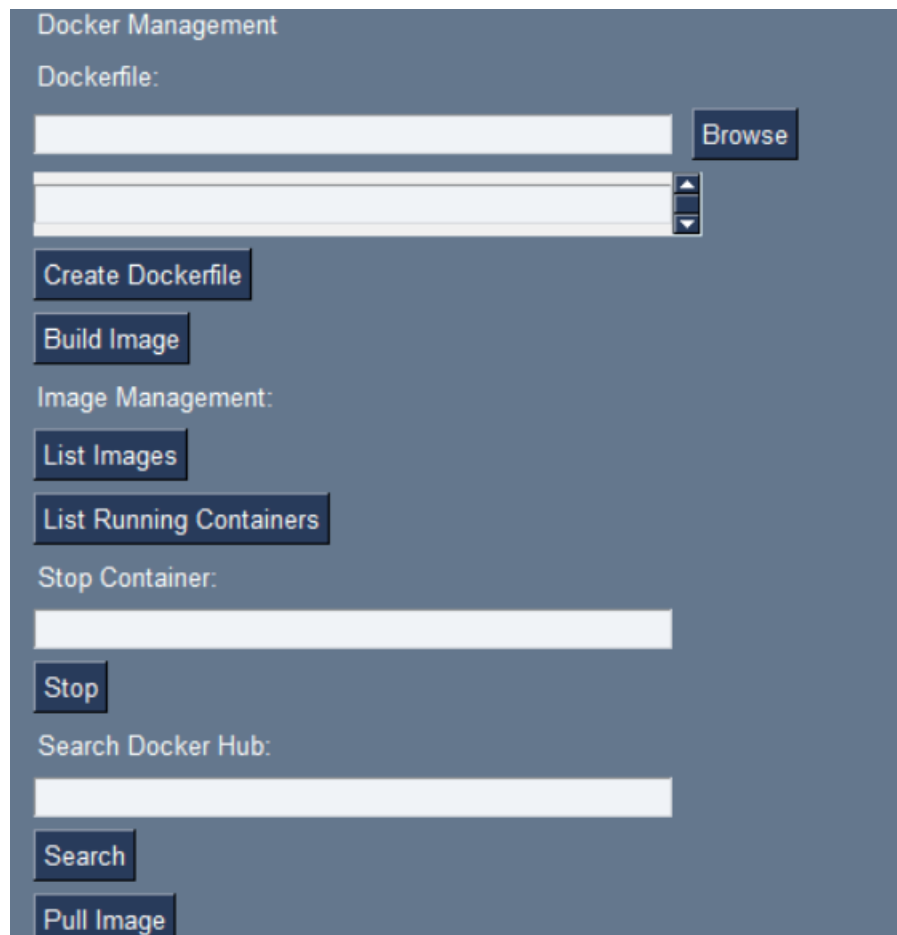
The screenshot shows a user interface for creating a virtual machine. It features a section titled "create a virtual machine" with three radio button options: "Low-Power" (selected), "standard", and "High-Performance". Below this is a section titled "custom virtual machine settings" with three input fields: "CPU Cores:", "Memory (MB):", and "Disk Size (GB):". A "create" button is located at the bottom left of the form.

VMs allow you to run virtual computers on your system.

1. Under the "**create a virtual machine**" section, choose one of the predefined options:
  - **Low-Power:** Ideal for basic tasks with lower resource requirements.
  - **Standard:** Suitable for everyday tasks with a balanced resource allocation.

- **High-Performance:** Designed for demanding tasks requiring more CPU, memory, and disk space.
2. If you want a custom VM configuration, leave the radio buttons unselected and enter the desired values in the following fields:
    - **CPU Cores:** Number of virtual CPU cores for the VM.
    - **Memory (MB):** Amount of memory (in Megabytes) allocated to the VM.
    - **Disk Size (GB):** Storage space (in Gigabytes) allocated to the VM's hard drive.
  3. Once you've chosen your VM configuration, click the "**Create**" button.

## Docker Management



The screenshot shows a web interface titled "Docker Management" with a dark blue background. It contains several sections: "Dockerfile:" with a text input field and a "Browse" button; "Image Management:" with buttons for "Create Dockerfile", "Build Image", "List Images", and "List Running Containers"; "Stop Container:" with a text input field and a "Stop" button; and "Search Docker Hub:" with a text input field, a "Search" button, and a "Pull Image" button.

Docker allows you to package and run applications in containers.

### Creating Dockerfiles

A Dockerfile defines how to build a Docker image.

4. Click the "**Dockerfile:**" text box and choose a location to save your Dockerfile using the "**Browse**" button.

5. In the large **"Dockerfile content"** box, type the instructions for building your Docker image. You might need some knowledge of Dockerfile syntax for this.
6. Click the **"Create Dockerfile"** button to save your Dockerfile.

### Building Docker Images

7. Make sure you have a Dockerfile created (see previous section).
8. Click the **"Build Image"** button.
9. A pop-up window will ask you to enter a name for your Docker image. Type a desired name and press **"OK"**.
10. The program will build the image and notify you upon successful completion.

### Managing Docker Images and Containers

- **List Images:** Click the **"List Images"** button to see a list of all available Docker images on your system.
- **List Running Containers:** Click the **"List Running Containers"** button to see a list of containers currently running on your system.
- **Stop Container:**
  - a. Find the ID of the container you want to stop in the list from the previous step.
  - b. Enter the container ID in the **"Container ID:"** text box.
  - c. Click the **"Stop"** button.
- **Search Docker Hub:**
  - d. Docker Hub is a library of public Docker images.
  - e. Enter a search term for the desired image in the **"Search Docker Hub:"** text box.
  - f. Click the **"Search"** button to see if the image is available on Docker Hub.
- **Pull Image:**
  - g. Docker Hub allows you to download images to your system.
  - h. Click the **"Pull Image"** button.
  - i. A pop-up window will ask you for the image name you want to pull. Enter the name and press **"OK"**.
  - j. The program will download the image from Docker Hub if available.

### Exiting the Program

Click the **"Exit"** button in the bottom right corner to close the program.

