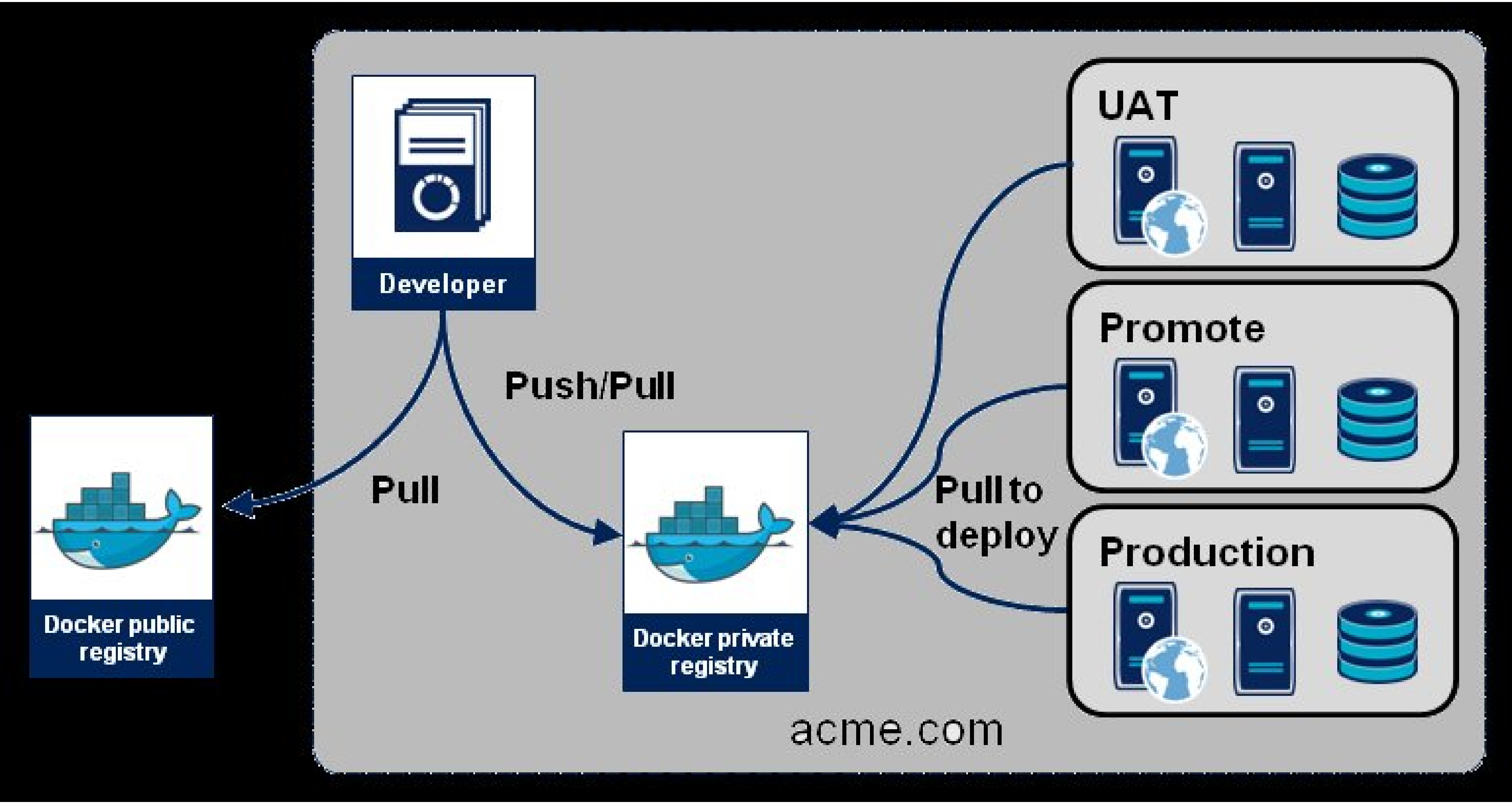
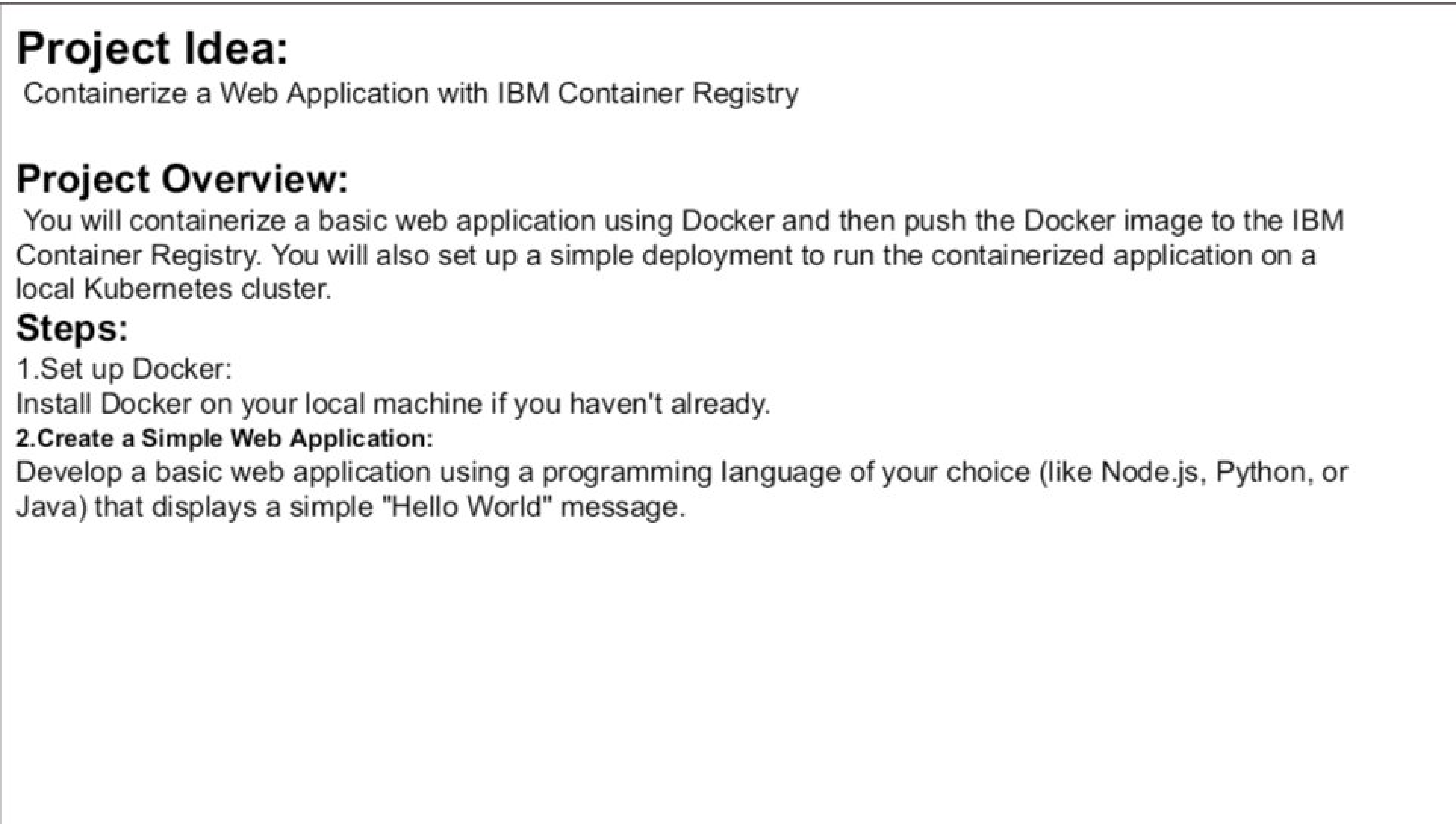
The IBM Container Registry is a private container image registry that enables you to store and distribute Docker images. It allows you to securely store and manage your container images while integrating with other IBM Cloud services.

Containerizing an application involves packaging it with its dependencies, libraries, and configuration files into a container image, typically using Docker. This process makes the application portable and allows it to run consistently across different environments.To use the IBM Container Registry to containerize your application, you would typically build a Docker image of your application, tag it with the appropriate repository URL, and then push it to the IBM Container Registry. This enables you to manage and deploy your containerized application using the IBM Cloud Kubernetes Service or other container orchestration tools.


Developer
Push/Pull
Pull
Docker public registry
Docker private registry
Pull to deploy
UAT
Promote
Production
acme.com



Project Idea:

Containerize a Web Application with IBM Container Registry

Project Overview:

You will containerize a basic web application using Docker and then push the Docker image to the IBM Container Registry. You will also set up a simple deployment to run the containerized application on a local Kubernetes cluster.

Steps:

1.Set up Docker:

Install Docker on your local machine if you haven't already.

2.Create a Simple Web Application:

Develop a basic web application using a programming language of your choice (like Node.js, Python, or Java) that displays a simple "Hello World" message.

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3.Write a Dockerfile:

Create a Dockerfile that sets up the environment and specifies how to build the Docker image for your web application.

4.Build the Docker Image: Use the Dockerfile to build the Docker image for your web application.

5.Tag and Push the Docker Image: Tag the Docker image with the appropriate repository URL from the IBM Container Registry and push the image to the IBM Container Registry.

6.Set Up a Kubernetes Cluster: Set up a local Kubernetes cluster for testing purposes using tools like Minikube or kind.

7.Deploy the Containerized Application:
Deploy the containerized application on the local Kubernetes cluster.
8.Test the Application: Access the application via the exposed service and verify that the "Hello World" message is displayed.

Summary Report:

This project will give you hands-on experience with containerization using Docker, the IBM Container Registry, and basic Kubernetes deployment. You'll gain a practical understanding of how to manage and deploy containerized applications using these technologies.