Distributed Computing Systems (CSE 707)

COMPLETED EXTRA CREDIT COURSES

MSCSE, FALL 2020

BRAC UNIVERSITY

SAHIBA TASNEEM
STUDENT ID: 2026022

Table of Contents

Course 1: Programming Foundations (Fundamentals)

Learning Objectives:

- Writing source code
- Basic statements and expressions
- Working with numbers and strings
- Writing conditional code
- Increasing your efficiency with functions
- Working with comments
- Making decisions in code
- Troubleshooting errors
- Learning about other languages

Skills Covered: Python (Programming Language), Programming, JavaScript

Certificate:

Course 2: Learning Linux Command Line

Learning Objectives:

- Recognize what the characters "-h" represent in the statement "df –h/home/alice/Documents".
- Explain how to recall a previous command in Bash.
- Identify what the command "ls -l" will show.
- Recall what is needed to use the find command to look for files by name, size, and so on.
- List the two modes file permissions can be set to.
- Recall why many command line tools are intended to be used in pipes with other commands.
- Explain what the command "grep -E "[123]" report.txt" will show.
- Identify what the ">" symbol is often used for.

Skills Covered: Bash, Network Administration, Computer Networking, Linux

Certificate:

Course 3: Learning Cloud Computing (Core Concepts)

Learning Objectives:

- Differentiate between the different types of clouds, including Saas, laaS, and PaaS.
- Define the characteristics of Saas, laaS, and PaaS.
- Explain the definition and purpose of TCO.
- Identify the data and applications necessary to move to the cloud.
- Explain the importance of cloud security.
- Recognize the essentials of cloud monitoring and management.

Skills Covered : Cloud Administration, Cloud Computing, System Migration

Certificate:

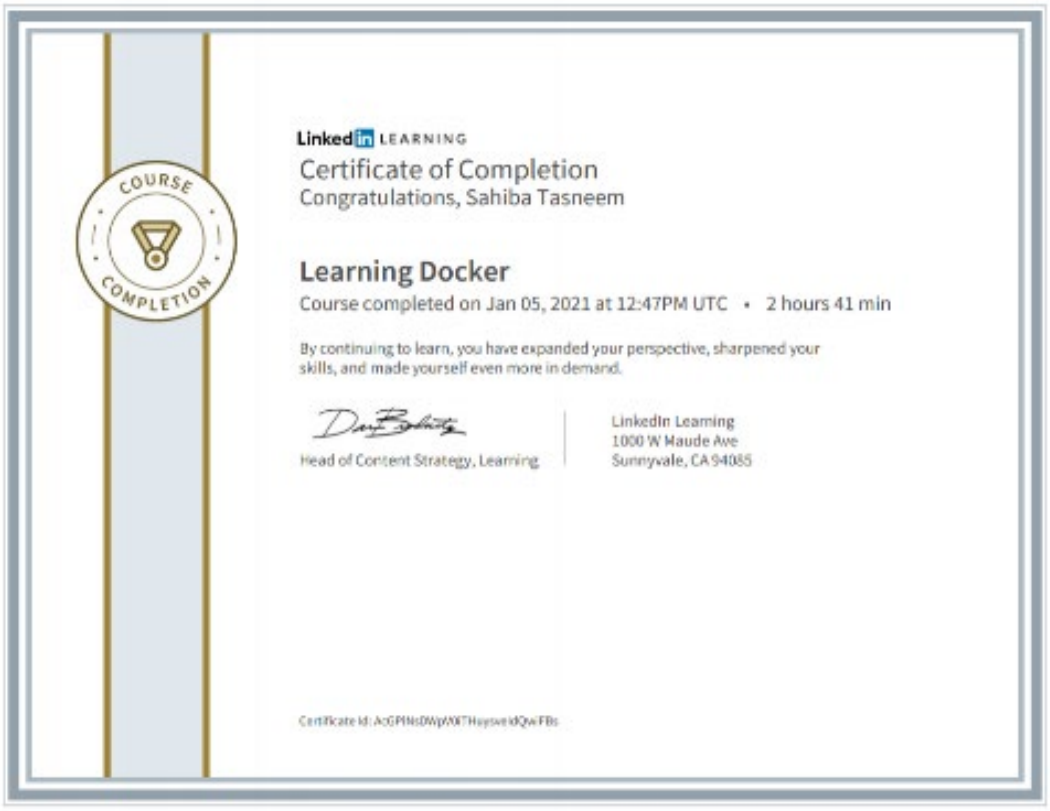
Course 4: Learning Docker

Learning Objectives:

- Installing Docker on Mac, Windows, and Linux
- Understanding the Docker flow
- Running processes in containers
- Managing, networking, and linking containers
- Working with Docker images, volumes, and registries
- Building Docker files
- Managing networking and namespaces with Docker
- Building entire systems with Docker

- **Skills Covered**: Cloud Computing, Cloud Development, Docker Products

Certificate:



Course 5: Learning Kubernetes

Learning Objectives:

- What is containerization?
- Kubernetes features
- Clusters, nodes, and pods
- Deployments, jobs, and services
- Getting an application up and running
- Working with labels
- Handling application upgrades
- Dealing with configuration data
- Running jobs
- Production deployments
- Monitoring and logging
- Security in Kubernetes

Skills Covered: Kubernetes

Certificate: