# Contents

# 1 Microsoft Azure Data Fundamentals

This repository contains the hands-on lab exercises for Microsoft course DP-900 *Microsoft Azure Data Fundamentals* and the self-paced modules on Microsoft Learn. The labs are designed to accompany the learning materials and enable you to practice using the technologies they describe.

- **Download Latest Student Handbook and AllFiles Content**
- **Are you an MCT?** - Have a look at our GitHub User Guide for MCTs
- **Need to manually build the lab instructions?** - Instructions are available in the MicrosoftLearning/Docker-Build repository

## 1.1 What are we doing?

- To support this course, we will need to make frequent updates to the course content to keep it current with the Azure services used in the course. We are publishing the lab instructions and lab files on GitHub to allow for open contributions between the course authors and MCTs to keep the content current with changes in the Azure platform.

- We hope that this brings a sense of collaboration to the labs like we've never had before - when Azure changes and you find it first during a live delivery, go ahead and make an enhancement right in the lab source. Help your fellow MCTs.

## 1.2  How should I use these files relative to the released MOC files?

- The instructor handbook and PowerPoints are still going to be your primary source for teaching the course content.

- These files on GitHub are designed to be used in conjunction with the student handbook, but are in GitHub as a central repository so MCTs and course authors can have a shared source for the latest lab files.

- It will be recommended that for every delivery, trainers check GitHub for any changes that may have been made to support the latest Azure services, and get the latest files for their delivery.

## 1.3  What about changes to the student handbook?

- We will review the student handbook on a quarterly basis and update through the normal MOC release channels as needed.

## 1.4  How do I contribute?

- Any MCT can submit a pull request to the code or content in the GitHub repro, Microsoft and the course author will triage and include content and lab code changes as needed.

- You can submit bugs, changes, improvement and ideas. Find a new Azure feature before we have? Submit a new demo!

## 1.5  Notes

### 1.5.1  Classroom Materials

## 1.6  It is strongly recommended that MCTs and Partners access these materials and in turn, provide them separately to students. Pointing students directly to GitHub to access Lab steps as part of an ongoing class will require them to access yet another UI as part of the course, contributing to a confusing experience for the student. An explanation to the student regarding why they are receiving separate Lab instructions can highlight the nature of an always-changing cloud-based interface and platform. Microsoft Learning support for accessing files on GitHub and support for navigation of the GitHub site is limited to MCTs teaching this course only.

## 1.7  title: Online Hosted Instructions permalink: index.html layout: home

# 2  Content Directory

Hyperlinks to each of the lab exercises and demos are listed below.

## 2.1  Labs

{% assign labs = site.pages | where_exp:"page", "page.url contains '/Instructions/Labs'" %} | Module | Lab | | --- | --- | {% for activity in labs %}| {{ activity.lab.module }} | [{{ activity.lab.title }}{% if activity.lab.type %} - {{ activity.lab.type }}{% endif %}](/home/ll/Azure_clone/Azure_new/DP-900T00A-Azure-Data-Fundamentals/{{ site.github.url }}{{ activity.url }}) | {% endfor %}

## 2.2 Demos

## 2.3 {% assign demos = site.pages | where_exp:"page", "page.url contains '/Instructions/Demos'" %} | Module | Demo | | --- | --- | {% for activity in demos %}| {{ activity.demo.module }} | [{{ activity.demo.title }}](/home/ll/Azure_clone/Azure_new/DP-900T00A-Azure-Data-Fundamentals/{{ site.github.url }}{{ activity.url }}) | {% endfor %}

## 2.4 lab: title: 'Lab 01: Provision Azure relational database services' module: 'Module 02: Explore relational data in Azure'

## 2.5 Instructions

As part of your role at Contoso as a data engineer, you've been asked to create and configure SQL Server, PostgreSQL, and MySQL servers for Azure.

In this lab you'll create and configure one of the following servers for Azure: SQL Server, PostgreSQL, or MySQL.

1. Go to the Microsoft Learn exercise at https://aka.ms/dp900lab01 and complete the unit in the browser:

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## 2.6 lab: title: 'Lab 02: Use SQL to query Azure SQL Database' module: 'Module 02: Explore relational data in Azure'

## 2.7 Instructions

Contoso has provisioned the SQL database and has imported all the inventory data into the data store. As lead developer, you've been asked to run some queries over the data.

In this lab, you'll query the database to find how many products are in the database, and the number of items in stock for a particular product.

1. Go to the Microsoft Learn exercise at https://aka.ms/dp900lab02 and complete the unit in the browser:

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## 2.8 lab: title: 'Lab 03: Provision non-relational Azure Data Services' module: 'Module 03: Explore non-relational data in Azure'

## 2.9 Instructions

In the sample scenario, you've decided to create the following data stores:

- A Cosmos DB for holding information about the volume of items in stock. You need to store current and historic information about volume levels, so you can track how levels vary over time. The data is recorded daily.
- A Data Lake store for holding production and quality data.
- A blob container for holding images of the products the company manufactures.
- File storage for sharing reports.

In this lab, you'll provision and configure the Cosmos DB account, and test it by creating a database, a container, and a sample document. You'll also provision an Azure Storage account that can provide blob, file, and Data Lake storage.

1. Go to the Microsoft Learn exercise at https://aka.ms/dp900lab03 and complete the unit in the browser:

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## 2.10 lab: title: 'Lab 02: Upload, download, and query data in a non-relational data store' module: 'Module 03: Explore non-relational data in Azure'

## 2.11 Instructions

In the sample scenario, suppose that you've created the following data stores:

A Cosmos DB for holding information about the products that Contoso manufactures. A blob container in Azure Storage for holding the images of products. A file share, in the same Azure Storage account, for holding product documentation. In this exercise, you'll upload data to these data stores. You'll run queries against the data in the Cosmos DB database. Finally, you'll download and view the images and documents held in Azure Storage.

You'll perform this exercise using the Azure portal and the command line.

1. Go to the Microsoft Learn exercise at https://aka.ms/dp900lab04 and complete the unit in the browser:

# 3 DP-900 trainer lab mapping

This course, DP-900: Microsoft Azure Data Fundamentals, has a set of labs designated for instructor-led training.

Note: Instructors may choose ask students to complete one or more labs on their own time by using the exercises in the associated Learn learning paths (https://docs.microsoft.com/users/23110622/collections/0kjyh8rn5g

## 3.1 DP-900 module mapping to labs

| DP-900 Trainer Lab | Topic | Markdown File |
|---|---|---|
| 01: DP-900 Module 02 | Provision Azure relational database services | 01-Provision-Azure |
| 02: DP-900 Module 02 | Use SQL to query Azure SQL Database learning in Azure Machine Learning | [https://github.cor |
| 03: DP-900 Module 03 | Provision non-relational Azure data services | 03-Provision-non-r |
| 04: DP-900 Module 03 | Upload, download, and query data in a non-relational data store | 04-Upload-downloa |