**Azure libraries for Python and Python usage patterns**

**Overview**

**Azure libraries for Python:**

Azure libraries for Python allow you to interact with Azure services from your Python code, whether you run it locally on your computer or in the cloud. These libraries support Python 3.7 or later versions.

**Authentication:**

When running code locally, you can authenticate with Azure using environment variables. These variables contain information required for secure access to Azure services.

**Installation:**

To use the Azure libraries in your Python project, you can install them using pip (Python's package manager)

**Management and Client Libraries:**

Azure libraries are categorized into two types: management libraries and client libraries. Management libraries are used for creating and managing Azure resources, while client libraries are used for connecting to and using those resources.

**Azure Python Libraries:**

1. **Azure SDK for Python:**

Azure SDK for Python is a comprehensive collection of python libraries that enabled developers to interact with various azure services. You have work for the azure resources.

**Pip install azure-sdk-for-python**

1. **Azure Identity:**

The “azure-identity” library is used for Authenticating and authorization when connecting to azure services.it handles secure access to azure resources and supports various authentication mechanism.

**Pip install azure-identity**

1. **Azure Storage Blob:**

The “azure-storage-blob” libraries allow Python application to work with azure blob storage. This service is used for storing and managing unstructured data, such as image, videos, and documents.

**Pip install azure-storage-blob**

1. **Azure Cosmos:**

The “azure-cosmos” libraries enables Python developers to interact with Azure cosmos DB, a globally distributed, multi-model database service.

**Pip install azure-cosmos**

1. **Azure Key Vault:**

The azure-keyvault-secrets library allows Python applications to securely access and manage secrets stored in Azure Key Vault. Azure Key Vault is used to store sensitive information, such as passwords and API keys.

**Pip install azure-keyvault-secrets**

1. **Azure Event Hub client:**

The azure-eventhub library enables Python applications to work with Azure Event Hubs, a scalable event streaming platform. It allows developers to send and receive event data from various sources.

**Pip install azure-eventhub**

**Management Libraries:**

Management libraries are used to create, provision, and manage Azure resources from python scripts.

**Azure-mgmt-web**: it is cover a wide range of azure services, such as “azure-mgmt-web” for app service

**Azure-mgmt-storage**: it is used for storage.

**Azure-mgmt-resources**: it is create and manage resources group and deployments.

**Azure-mgmt-compute**: it is used for virtual machine.