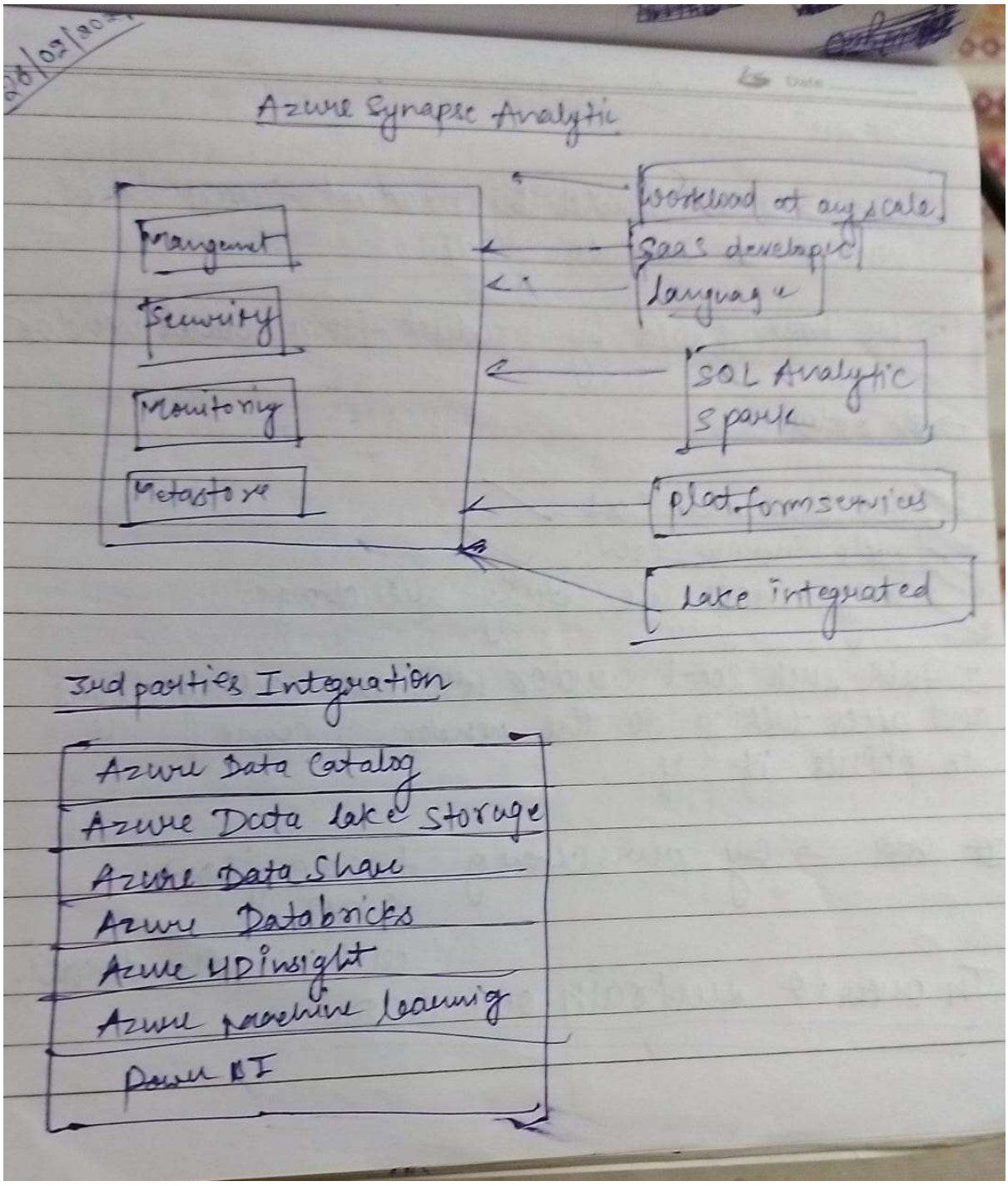
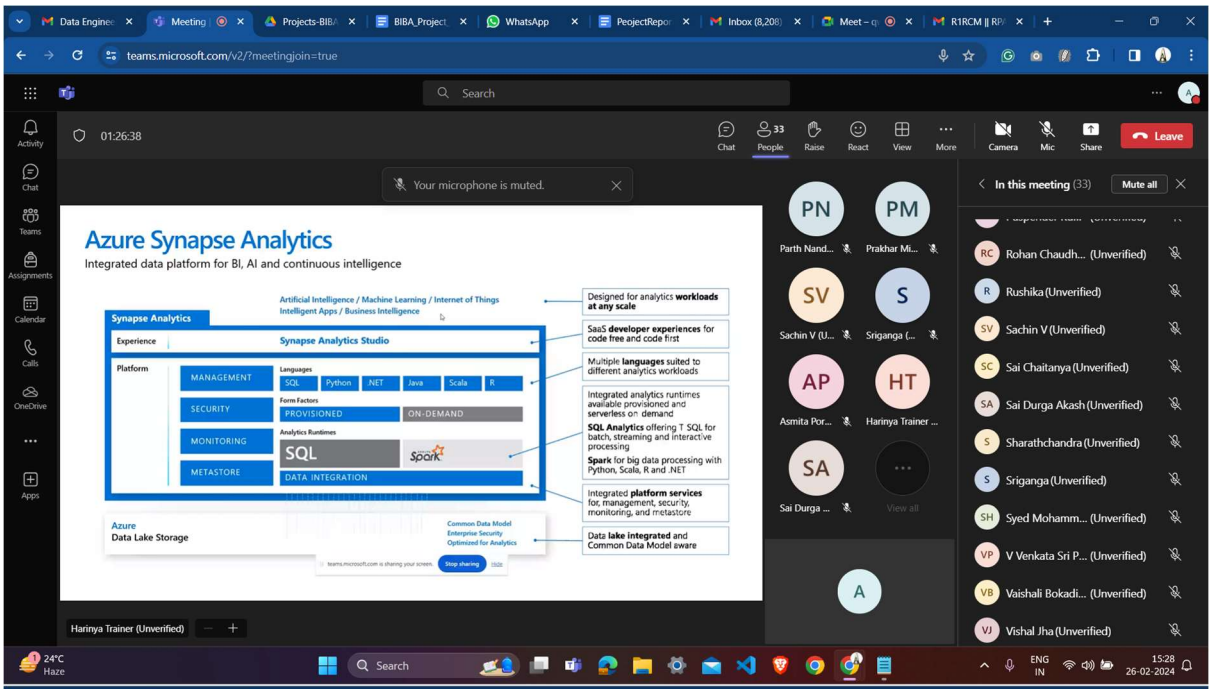
Name: Abhishek Kanoujia

DATA ENGINEERING BATCH 1

DAY 27 ASSIGNMENT

Class hand written note:-




Azure Synapse Analytics
Integrated data platform for BI, AI and continuous intelligence
Artificial Intelligence / Machine Learning / Internet of Things
Intelligent Apps / Business Intelligence
Synapse Analytics
Experience
Synapse Analytics Studio
Platform
MANAGEMENT
SECURITY
MONITORING
METASTORE
Languages
SQL
Python
.NET
Java
Scala
R
Form Factors
PROVISIONED
ON-DEMAND
Analytics Runtimes
SQL
Spark
DATA INTEGRATION
Azure
Data Lake Storage
Common Data Model
Enterprise Security
Optimized for Analytics
Designed for analytics workloads at any scale
SaaS developer experiences for code free and code first
Multiple languages suited to different analytics workloads
Integrated analytics runtimes available provisioned and serverless on demand
SQL Analytics offering T SQL for batch, streaming and interactive processing
Spark for big data processing with Python, Scala, R and .NET
Integrated platform services for, management, security, monitoring, and metastore
Data lake integrated and Common Data Model aware
Your microphone is muted.
01:26:38
Chat
People
Raise
React
View
More
Camera
Mic
Share
Leave
In this meeting (33)
Mute all
Parth Nand...
Prakhar Mi...
Sachin V (U...
Sriganga (...
Asmita Por...
Harinya Trainer ...
Sai Durga ...
View all
Rohan Chaudh... (Unverified)
Rushika (Unverified)
Sachin V (Unverified)
Sai Chaitanya (Unverified)
Sai Durga Akash (Unverified)
Sharathchandra (Unverified)
Sriganga (Unverified)
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V Venkata Sri P... (Unverified)
Vaishali Bokadi... (Unverified)
Vishal Jha (Unverified)
Harinya Trainer (Unverified)
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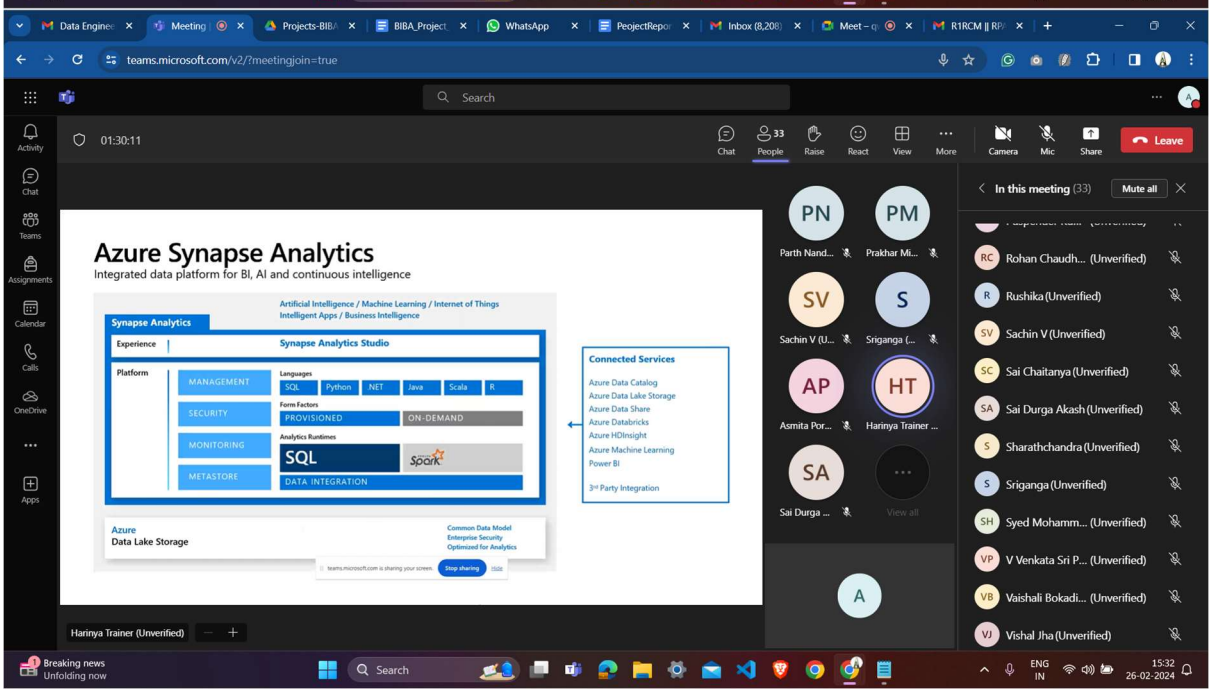
26-02-2024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Enterprise Security
Optimized for Analytics
Connected Services
Azure Data Catalog
Azure Data Lake Storage
Azure Data Share
Azure Databricks
Azure HDInsight
Azure Machine Learning
Power BI
3rd Party Integration
01:30:11
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In this meeting (33)
Mute all
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Sharathchandra (Unverified)
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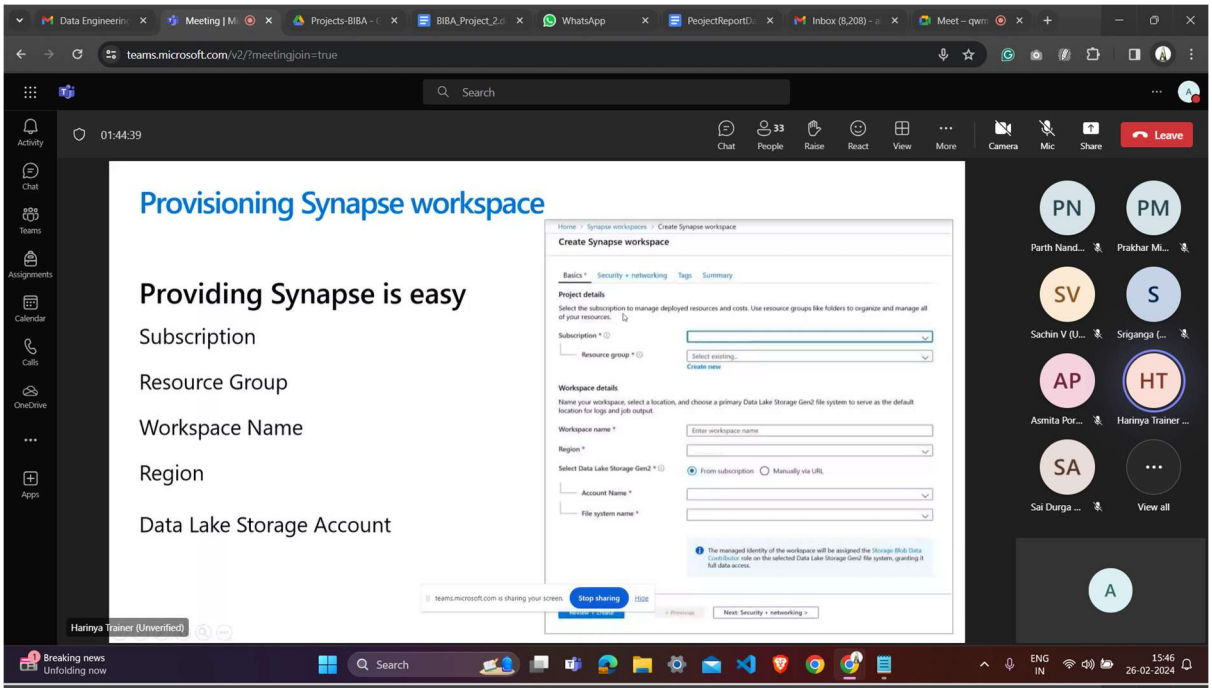
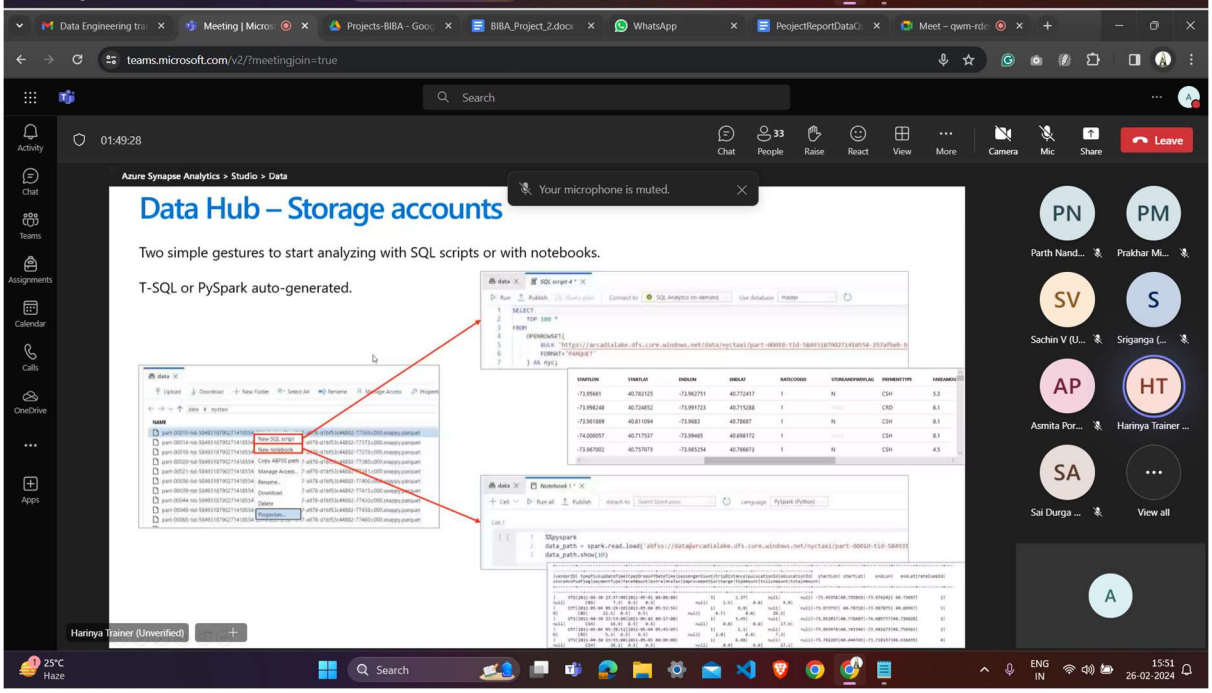
Syed Mohamm... (Unverified)
V Venkata Sri P... (Unverified)
Vaishali Bokadi... (Unverified)
Vishal Jha (Unverified)
Harinya Trainer (Unverified)
Breaking news
Unfolding now
Search
ENG
IN
15:32
26-02-2024


Provisioning Synapse workspace
Providing Synapse is easy
Subscription
Resource Group
Workspace Name
Region
Data Lake Storage Account
Create Synapse workspace
Harinya Trainer (Unverified)


Azure Synapse Analytics > Studio > Data
Your microphone is muted.
Data Hub – Storage accounts
Two simple gestures to start analyzing with SQL scripts or with notebooks.
T-SQL or PySpark auto-generated.
Harinya Trainer (Unverified)

Azure Synapse Analytics, formerly known as Azure SQL Data Warehouse, is a cloud-based analytics service provided by Microsoft Azure. It's a unified analytics platform that integrates enterprise data warehousing and big data analytics. Azure Synapse aims to streamline the process of ingesting, preparing, managing, and serving data for immediate business intelligence and machine learning needs.

1. **Unified Analytics**: Azure Synapse provides a unified experience for data engineers, data scientists, and business analysts. It integrates big data and data warehousing capabilities into a single service, enabling users to analyze both structured and unstructured data.

2. **Data Integration**: It offers built-in integration with various data sources, including Azure Blob Storage, Azure Data Lake Storage, Azure SQL Database, Azure Cosmos DB, and more. This allows users to ingest data from different sources easily.

3**. Data Warehousing**: Azure Synapse provides a fully managed, scalable data warehousing solution capable of handling petabytes of data. It uses massively parallel processing (MPP) architecture to execute complex queries quickly and efficiently.

4. **Big Data Analytics**: With support for Apache Spark and built-in connectors for popular big data frameworks like Apache Hadoop and Apache Kafka, Azure Synapse allows users to analyze and process large volumes of data using familiar tools and languages.

5. **Data Exploration** and Visualization: It includes integrated data exploration and visualization tools, such as Power BI and Azure Synapse Studio, to help users gain insights from their data and create interactive reports and dashboards.

6. **Security and Compliance**: Azure Synapse offers robust security features, including encryption at rest and in transit, role-based access control (RBAC), and dynamic data masking. It also helps organizations comply with regulatory requirements such as GDPR, HIPAA, and SOC.

7. **Serverless SQL Pool:** Azure Synapse offers a serverless SQL pool option, allowing users to run on-demand analytics queries without the need to provision or manage dedicated resources.

8. **Integration with Azure Services:** It integrates seamlessly with other Azure services like Azure Machine Learning, Azure Data Factory, Azure Databricks,

and Azure Active Directory, enabling users to build end-to-end analytics solutions. Overall, Azure Synapse Analytics provides a comprehensive platform for organizations to analyze and derive insights from their data, whether it's structured or unstructured, in real-time or batch processing scenarios. It offers scalability, performance, and flexibility to meet the evolving needs of modern data-driven businesses.