**WEEKLY DIARY – WORKING IN KPMG**

*A weekly diary submitted in partial fulfilment of the requirements for the Award of Degree of*

**BACHELOR OF TECHNOLOGY**

**in**

**COMPUTER SCIENCE & ENGINEERING**

**by**

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**(Duration: 13th Jan, 2022 to 10th July, 2022)**



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

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**Weekly Progress:**

## Week 1(13 January 2022 - 15 January 2022):

* It was the introduction week where different sessions and orientations were conducted with different levels of management in the company
* Gave us information about the different departments, work culture, the company’s core values etc., and told us whom to contact in case of any help required.
* Proper briefing was done

## Week 2 (17 January 2022 - 21 January 2022):

* Laptop configurations required for the company work were done during this week.
* Setup of laptop and installation of required softwares was done.
* We were given company specific training that is necessary for learning the company ethics, values, and their work culture like the Linkedin general courses.

## Week 3 and Week 4 (24 January 2022 – 4 February 2022):

* Basic Linkedin learning courses that were given need to be completed.
* Continue with Linkedin learning and consultation courses.

## Week 5 (7 February 2022 - 11 February 2022):

* We were introduced to cloud computing and Microsoft Azure. KPMG’s learning partner CloudThat has joined us in these 3 months of Azure training.
* We have also learned the major topics of cloud computing which includes:

• Cloud Models - Public Cloud, Private Cloud and Hybrid Cloud

• Consumption Based Model

• Cloud Services – IAAS, PAAS, SAAS

* learned basic of Azure portal and different services offered by Azure:

• Azure compute and networking services

• Azure storage service

• Azure identity and security services

• Azure Management and Governance

* Assessment

## Week 6 (14 February 2022 – 18 February 2022):

* Basic teachings of DBMS.
* After completion of DBMS they introduce us with fundamentals of database concept in a cloud environment. In this we have learned topics like:

• OLTP and OLAP

• Batch and Streaming data

• Azure services for relational data

• Azure services for non-relational data.

* Assessment

## Week 7 (21 February 2022 – 25 February 2022):

* We learnt about the basis of python programming which includes

• Python – Overview

• Basic Syntax and Variable Types

• Loops in Python

• Lists, Tuples and Dictionary

• Functions in Python

• Python File Handling.

* Assessment

## Week 8 (28 February 2022 – 4 March 2022):

* We learnt about the Azure Data Factory which is a a fully managed, serverless hybrid data integration service
* It provides a data integration and transformation layer that works across your digital transformation initiatives.
* Enables integrators and data engineers to drive business and IT led Analytics/BI.
* Prepare data, construct ETL and ELT processes, and orchestrate and monitor pipelines code-free. The managed Apache Spark™ service takes care of code generation and maintenance.
* Transform faster with intelligent intent-driven mapping that automates copy activities.
* Assessment

## Week 9 (7 March 2022 - 11 March 2022):

* Learnt SQL Programming.
* Introduction to T-SQL.
* Assessment

## Week 10 (14 March 2022 – 18 March 2022):

* We were introduced to Apache Spark
* Apache Spark is a parallel processing framework that supports in-memory processing to boost the performance of big-data analytic applications.
* Apache Spark in Azure HDInsight is the Microsoft implementation of Apache Spark in the cloud, and is one of several Spark offerings in Azure.
* Spark provides primitives for in-memory cluster computing. A Spark job can load and cache data into memory and query it repeatedly.
* In-memory computing is much faster than disk-based applications, such as Hadoop, which shares data through Hadoop distributed file system (HDFS)
* Assessment

## Week 11 and Week 12 (21 March 2022 – 1 April 2022):

* We were introduced to Azure Synapse Analytics

## Azure Synapse Analytics is a limitless analytics service that brings together data integration, enterprise data warehousing and big data analytics.

## It gives you the freedom to query data on your terms, using either serverless or dedicated options—at scale.

## Azure Synapse brings these worlds together with a unified experience to ingest, explore, prepare, transform, manage and serve data for immediate BI and machine learning needs.

## Week 13 (4 April 2022 – 8 April 2022):

* We were introduced to Azure Databricks
* Azure Databricks is optimized for Azure and tightly integrated with Azure Data Lake Storage, Azure Data Factory, Azure Machine Learning, Azure Synapse Analytics, Power BI and other Azure services to store all your data on a simple, open lakehouse and unify all your analytics and AI workloads.
* Databricks SQL provides an easy-to-use platform for analysts who want to run SQL queries on their data lake, create multiple visualization types to explore query results from different perspectives, and build and share dashboards

## Week 14 (11 April 2022 – 15 April 2022):

* Basic Introduction to Azure Log analytics and Azure DevOps.
* Assessment

## Week 15 (18 April 2022 – 22April 2022):

* Introduce to Forage platform
* Consulting 101 Program

## Week 16 (25 April 2022 – 5 May 2022):

* Break and time given for completion of certifications given by the company.
* AZ-900(Cloud Fundamentals) Certification completed.

## Week 17 and Week 18 (9 May 2022 – 20 May 2022):

* 2-weeks break for college end semester exam and major project evaluation.

## Week 19 and Week 20 (23 May 2022 – 31 May 2022):

* 2 more certifications completed
* DP-900(Data Fundamentals) Certification
* DP-203(Data Engineering) Certification

## Week 21,22,23 (1 June 2022 – 24 June 2022):

* Capstone Project where we need to apply all the learnings learned from training and certifications
* The company want to have a dedicated team which can analyze data collected by ECDC Epidemic Intelligence to keep an eye on worldwide COVID trends such as reported cases, mortality rate, hospitalization & ICU admission rates & current occupancy, testing volume and country response which can act as a feedback to improve their existing healthcare processes and patient monitoring system to respond optimally towards COVID.
* We had to come up with an automated solution rather than manual updation using the technologies we had learnt.

## Week 24 and 25 (27June 2022 – 8 July 2022):

## Forage platform tasks and 101 consultation program.