ABOUT THE COMPANY

AES Technologies Pvt. Ltd. is an ISO 9001:2015 certified full-service web and software development company based in Coimbatore, South India. Founded in 1998, the company has established itself as a leader in providing comprehensive technology solutions aimed at enhancing digital transformation and innovation for businesses across various sectors.

Services and Products:

AES Technologies offers a wide array of services including:

- **Web Development:** Custom web solutions tailored to meet the specific needs of clients.
- **Software Development:** End-to-end software solutions that streamline business processes.
- **Mobile App Development:** Development of mobile applications for both enterprise and consumer needs.
- **Technology Consulting:** Expert advice to help businesses navigate their digital transformation journeys.
- **Outsourcing Solutions:** Flexible partnership models for software development and testing needs.

The company emphasizes a structured approach to project management, ensuring that all solutions are high-performing, user-friendly, and cost-effective.

Insights:

With over 25 years in the industry, AES Technologies has successfully completed over 8,000 projects and serves more than 2,000 global clients. The company prides itself on its team of over 500 IT professionals who are dedicated to delivering innovative solutions that foster long-term client relationships.

Mission and Vision:

- **Mission:** To build lasting relationships with clients through innovative, high-quality, and cost-effective solutions.
- **Vision:** To create high-end, innovative services and solutions that meet the evolving needs of clients.

AES Technologies also focuses on fostering partnerships with other software development companies and technology startups, providing them with the expertise and resources needed to succeed in a competitive landscape.

INTERNSHIP SCHEDULE

WEEK	DATE	DAY	NAME OF THE TOPIC / MODULE COVERED
WEEK 1	22/06/2024	SATURDAY	Orientation and Introduction
	24/06/2024	MONDAY	Getting Started with Power BI
	25/06/2024	TUESDAY	Dataset Overview
	26/06/2024	WEDNESDAY	SQL Basics Training
	27/06/2024	THURSDAY	Introduction to DAX
	28/06/2024	FRIDAY	SQL Query Practice (Part 1)
	29/06/2024	SATURDAY	SQL Query Practice (Part 2)
WEEK 2	01/07/2024	MONDAY	Exploratory Data Analysis (EDA) Part 1
	02/07/2024	TUESDAY	Exploratory Data Analysis (EDA) Part 2
	03/07/2024	WEDNESDAY	Exploratory Data Analysis (EDA) Part 3
	04/07/2024	THURSDAY	Developing DAX Measures (Part 1)
	05/07/2024	FRIDAY	Developing DAX Measures (Part 2)
	06/07/2024	SATURDAY	Collaboration on DAX Formulas (Part 1)
WEEK 3	08/07/2024	MONDAY	Collaboration on DAX Formulas (Part 2)
	09/07/2024	TUESDAY	Advanced Analytics with DAX (Part 1)
	10/07/2024	WEDNESDAY	Advanced Analytics with DAX (Part 2)
	11/07/2024	THURSDAY	Developing Interactive Dashboards (Part 1)
	12/07/2024	FRIDAY	Developing Interactive Dashboards (Part 2)
	13/07/2024	SATURDAY	Preparing Comprehensive Reports (Part 1)
WEEK 4	15/07/2024	MONDAY	Preparing Comprehensive Reports (Part 2)
	16/07/2024	TUESDAY	Finalizing Reports and Dashboards
	17/07/2024	WEDNESDAY	Finalizing Reports and Preparing Summaries
	18/07/2024	THURSDAY	Preparing the Final Presentation
	19/07/2024	FRIDAY	Delivering the Presentation to the BI Team and Management
	20/07/2024	SATURDAY	Reflection on Internship Experience
	21/07/2024	SUNDAY	Documentation and Future Planning

TRAINING TASK

WEEK 1: ORIENTATION AND TRAINING

- Participation in an orientation session to get acquainted with the company's policies, team members, and resources. Learn about the internship program's goals and expectations.
- **Getting Started with Power BI:** Familiarize yourself with the Power BI interface and its features. Learn how to import data, create basic visualizations, and navigate the Power BI workspace.
- **Dataset Overview:** Understand the structure and content of the 'Loan' dataset. Perform initial data exploration to get a sense of the data you'll be working with.
- **SQL Basics Training:** Get introduced to SQL syntax and basic database concepts. Practice writing simple queries to retrieve and manipulate data.
- **Introduction to DAX:** Learn the basics of Data Analysis Expressions (DAX). Start creating simple DAX formulas and understanding their syntax.
- **SQL Query Practice:** Enhance your SQL skills by practicing queries. Start with basic queries and gradually move to more complex data retrieval and manipulation tasks.

WEEK 2: DATA ANALYSIS PROJECTS

- **Exploratory Data Analysis (EDA):** Conduct exploratory data analysis on the 'Loan' dataset. Learn how to clean data, perform basic statistical analysis, and visualize data distributions. Identify patterns, outliers, and key insights.
- **Developing DAX Measures:** Dive deeper into DAX by creating more complex measures and calculated columns. Understand how to use DAX functions to perform advanced calculations and optimize performance.
- **Collaboration on DAX Formulas:** Work with team members to develop and refine DAX formulas. Share best practices, troubleshoot issues, and learn from each other's experiences.

WEEK 3: ADVANCED ANALYTICS AND REPORTING

- **Advanced Analytics with DAX:** Explore advanced DAX techniques for deeper data analysis. Learn about time intelligence functions, scenario analysis, and predictive analytics using DAX.
- **Developing Interactive Dashboards:** Create interactive dashboards in Power BI. Use slicers, filters, and advanced visualizations to enhance user experience and interactivity.
- **Preparing Comprehensive Reports**: Compile your data insights into comprehensive reports. Structure the reports for clarity, include key metrics, and add narratives to explain the findings.

WEEK 4: PRESENTATION AND FEEDBACK

- **Finalizing Reports and Dashboards:** Review and refine your reports and dashboards. Incorporate feedback from peers and mentors, ensure accuracy, and align with project goals.

- **Preparing the Final Presentation:** Design and prepare a final presentation to showcase your findings. Create engaging slides, rehearse your delivery, and focus on key insights and recommendations.
- **Delivering the Presentation:** Present your work to the BI team and management. Answer questions, discuss next steps, and demonstrate your understanding of the project.
- **Reflection and Documentation:** Reflect on your internship experience, document the project processes, and outline lessons learned. Plan for future career development based on the skills and knowledge gained.

TECHNICAL DESCRIPTION

WEEK 1: ORIENTATION AND TRAINING

In the first week, the technical focus is on familiarizing with the company's tools and resources, particularly Power BI and SQL. During the orientation, there will be an overview of the company's tools, software, and resources, along with an introduction to the internship project goals and expectations. When getting started with Power BI, the tasks include learning how to import data from various sources, create basic visualizations such as bar charts, line graphs, and pie charts, and understanding the Power BI workspace, including its main components like the report view, data view, and model view.

When reviewing the dataset, the task is to delve into the 'Loan' dataset to understand its schema, including data types, columns, and relationships between tables. Initial data exploration involves summarizing data using basic statistical methods, identifying missing values, and getting a general sense of the data distribution. The SQL Basics Training will cover the fundamentals of SQL, including SELECT statements, filtering data with WHERE clauses, sorting results with ORDER BY, and joining tables using INNER JOIN, LEFT JOIN, and other types of joins. SQL query practice involves retrieving specific subsets of data, performing aggregate operations like SUM and COUNT, and manipulating data using INSERT, UPDATE, and DELETE statements. The introduction to DAX will cover the basics of Data Analysis Expressions, including how to create simple measures and calculated columns, and introducing key functions like SUM, AVERAGE, and IF statements.

WEEK 2: DATA ANALYSIS PROJECTS

In the second week, the focus shifts to exploratory data analysis (EDA) and developing DAX measures. During EDA, the tasks include engaging in data cleaning processes such as handling missing values, removing duplicates, and correcting data types. Basic statistical analysis will be performed, including calculating means, medians, and standard deviations, and visualizing data distributions through histograms, box plots, and scatter plots.

The goal is to identify patterns, correlations, and potential outliers in the data. Developing DAX measures will involve creating more complex measures using functions like CALCULATE, FILTER, and ALL. This includes creating calculated columns and tables, and using DAX to perform time intelligence calculations, such as year-over-year growth and moving averages. Collaborating on DAX formulas will involve working with team members to solve complex problems, sharing DAX code snippets, and reviewing each other's work to ensure accuracy and efficiency.

WEEK 3: ADVANCED ANALYTICS AND REPORTING

The third week is dedicated to advanced analytics with DAX and developing interactive dashboards. Advanced DAX techniques will include using variables to simplify complex calculations, performing dynamic segmentation, and creating sophisticated time intelligence functions. Scenario analysis and predictive analytics using DAX, such as forecasting future trends based on historical data, will be explored.

Developing interactive dashboards will focus on creating user-friendly layouts that allow for easy data exploration. Interactivity will be added using slicers, filters, and drill-through actions, and advanced visualizations like heat maps, waterfall charts, and KPI indicators will be used to present data in a meaningful way. Preparing comprehensive reports involves structuring reports to highlight key insights, using narratives to explain the findings, and incorporating visual elements like charts and graphs to support the analysis**.**

WEEK 4: PRESENTATION AND FEEDBACK

In the final week, the focus is on finalizing reports and dashboards by reviewing them for accuracy, consistency, and completeness. Feedback from peers and mentors will be incorporated to ensure the reports and dashboards meet the project goals and align with the company's standards. Preparing the final presentation involves designing engaging slides that summarize the key findings, insights, and recommendations.

The presentation delivery will be rehearsed to ensure clarity and confidence. When delivering the presentation, the work will be presented to the BI team and management, demonstrating an understanding of the project and the ability to communicate complex data insights effectively. Finally, reflecting on the internship experience includes documenting the project processes, challenges faced, and lessons learned. Achievements will be outlined and future career development plans based on the skills and knowledge gained during the internship will be formulated.

OUTCOMES OF INTERNSHIP

WEEK 1: ORIENTATION AND TRAINING

- Familiarity with Power BI's data modeling and visualization capabilities.
- Understanding of SQL for data extraction and manipulation.
- Introduction to DAX for creating calculated columns and measures.

WEEK 2: DATA ANALYSIS PROJECTS

- Proficiency in creating data visualizations using Power BI.
- Ability to write complex DAX measures for advanced calculations.
- Understanding of data modeling best practices.

WEEK 3: ADVANCED ANALYTICS AND REPORTING

- Advanced understanding of time-based analysis using DAX.
- Experience in designing user-friendly dashboards in Power BI.
- Proficiency in data transformation and preparation.

WEEK 4: PRESENTATION AND FEEDBACK

- Optimization techniques for improving Power BI report performance.
- Ability to present technical findings to a non-technical audience.
- Reflection on the internship experience and future career goals.

SUMMARY

During my internship, I focused on developing skills in Power BI, SQL, and DAX for data analysis and visualization. The program was structured to build competencies progressively and culminate in a final project.

Initial Phase:

In the first week, I was introduced to the company's tools and resources and began learning Power BI. I gained proficiency in importing data, creating basic visualizations, and understanding the 'Loan' dataset's structure. SQL training involved learning fundamental commands for querying and manipulating data, and basic DAX training included creating simple measures and calculated columns.

Data Analysis and DAX Development:

In the second week, I performed exploratory data analysis (EDA) and developed complex DAX measures. I cleaned data, conducted statistical analyses, and visualized distributions to identify patterns and outliers. Advanced DAX techniques were applied to create detailed measures and perform time intelligence calculations. Collaboration with peers on DAX problems was also a key aspect.

Advanced Analytics and Dashboard Creation:

The third week focused on advanced DAX analytics and interactive dashboard development. I used advanced DAX techniques for dynamic segmentation and scenario analysis. I created interactive dashboards with user-friendly layouts and advanced visualizations, incorporating interactivity such as slicers and filters. Comprehensive reports were prepared to present key insights.

Finalization and Presentation:

In the final week, I refined reports and dashboards based on feedback, and prepared a presentation summarizing key findings and recommendations. I delivered this presentation to the BI team and management, demonstrating my ability to communicate complex insights effectively. The internship concluded with a reflection on the overall experience, documenting the processes, challenges, lessons learned, and future career development plans.