

# Guru Nanak Dev Engineering College

## Training Diary – TR-102 Report

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**Day 10**

Here is your professionally written and complete **Day 10 Training Diary** entry, covering your experience with **NotebookLM**, including the **Question Paper Analyzer**, **Stock Summary**, and **Audio Generation**:

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### Training Summary

On the tenth day of training, we explored **NotebookLM**, a powerful experimental tool by Google designed to turn documents into interactive knowledge bases. We built and tested applications like a **Question Paper Analyzer** and a **Stock Summary Generator**, and added a **text-to-speech layer** to convert the output into audio format.

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### Understanding NotebookLM

**NotebookLM** (Language Model for Notebooks) enables users to:

- Upload documents like PDFs, Word files, and text files
- Ask contextual questions based on uploaded content
- Generate intelligent responses using LLM-backed retrieval

It's highly useful in research, academic analysis, and structured summarization tasks.

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### Mini Project 1 – Question Paper Analyzer

We uploaded a sample **question paper document** to NotebookLM and performed the following tasks:

- Parsed the content section-wise
- Summarized the **type and level of questions** (e.g., easy, moderate, hard)
- Identified patterns like repeated topics, marks distribution, and subject focus

This tool helped analyze academic data efficiently and provided insight into test design trends.

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### Mini Project 2 – Stock Summary Generator

Next, we used NotebookLM to generate a **concise summary of a stock** by providing financial documents and market news.

#### Steps:

- Uploaded recent reports/articles about the stock
  - Asked NotebookLM to summarize current performance, key trends, and projections
  - Refined the output to get a brief yet informative explanation
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#### Text-to-Speech Layer for Response

After receiving the summarized content from NotebookLM, we passed the response to a **text-to-speech (TTS)** tool (e.g., xtts) to:

- Convert the summary into audio format
- Save and play the response for hands-free access

This end-to-end pipeline helped demonstrate how **multimodal AI workflows** can enhance user accessibility and interactivity.

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#### Learning Outcome

Today's session helped us:

- Understand and use **NotebookLM** for document-based LLM interaction
- Analyze structured academic and financial content automatically
- Combine **summarization** with **voice generation** to create an accessible AI system
- Explore multimodal interaction between text and audio outputs