Format for the Weekly Progress Report

Name of the Student 1	Dev Pandya
Roll Number of Student 1	22BCP409
Name of the Student 2 (if any)	Kavya Patel
Roll Number of Student 2 (if any)	22BCP406
Project Title	**Smart Energy Consumption Monitoring and Prediction Using Big Data**
Name of the Supervisor (Mentor) at PDEU	Dr. Samir Patel
Week Number	Week 2

Progress made in Week 2:

- Finalized requirements: real-time ingestion, batch + streaming processing, anomaly detection, forecasting, and visualization.
- Shortlisted tech stack: Apache Spark, Kafka, MongoDB, Grafana, MLlib, Scikit-learn.
- Collected and began preprocessing smart meter datasets (UK, UCI).
- Identified challenges: large-scale data handling, model selection, and pipeline integration.
- Planned next steps: set up Spark (local + Databricks), ingest datasets, build baseline prediction model, and start Kafka streaming pipeline.
- Expected outcome: prototype pipeline with data → Spark → ML prediction → dashboard output.

Dev Pandya	**Kavya Patel**	**Dr. Samir Patel**
Name & Signature of Student 1	**Name & Signature of Student 2**	**Name & Signature of Supervisor (Mentor)**