**Project Report: Measurement Converter**

**Project Team:**

* **Gregorio Morelos**
* **Aman Mehta**

**Project Overview:**

Our project is a Measurement Converter that converts pounds (lb) to kilograms (kg). The project was developed using Java Swing for the GUI and Spring ConversionService for the conversion logic. The user enters a weight in pounds and the application converts it to kilograms.

**Work Division:**

Gregorio Morelos worked on the GUI development while Aman Mehta worked on the conversion logic.

**GUI Development:**

Gregorio Morelos designed the GUI for the Measurement Converter application. He used Java Swing to create the graphical interface of the application. The GUI includes a label for the application name, two text fields for input and output, and two buttons for converting the weight and clearing the input field. He also implemented the layout of the application using BorderLayout and GridLayout.

**Conversion Logic:**

Aman Mehta worked on the conversion logic for the Measurement Converter. He used Spring ConversionService to handle the conversion from pounds to kilograms. He also implemented exception handling in case of conversion errors. He created a custom exception called ConversionErrorException, which extends the RuntimeException class, to handle any errors that may occur during the conversion process.

**Challenges Faced:**

During the development process, the team faced several challenges. Gregorio Morelos faced some difficulty in implementing the layout of the application using BorderLayout and GridLayout. However, he was able to overcome these challenges by referring to online resources and the Java documentation.

Aman Mehta faced some difficulty in implementing the conversion logic using Spring ConversionService. However, he was able to overcome these challenges by referring to online resources and the Spring documentation. He was also able to implement exception handling by creating a custom exception and catching any errors that may occur during the conversion process.

**Conclusion:**

In conclusion, the Measurement Converter project was successfully completed by the team of Gregorio Morelos and Aman Mehta. Gregorio Morelos developed the GUI for the application while Aman Mehta developed the conversion logic. The team faced some challenges during the development process, but they were able to overcome these challenges and deliver a functional application.