Problem Statement 1 - **Predicting Eligibility for "Target Drug"**

In problem statement 1, the objective was to develop a predictive model to determine whether a patient would be eligible for the "Target Drug" in the next 30 days. The steps followed to address the problem were as follows:

1.Data Preprocessing:

- Loaded the training data and converted the 'Date' column to datetime type.
- Created positive and negative sets for model development, considering the time aspect.

2.Feature Engineering:

- Added frequency-based features to represent the occurrence of incidents for each patient.
- Added time-based features, such as the number of days since the last incident for each patient.

3.Model Development:

- Used a RandomForestClassifier to train the predictive model.
- Evaluated the model on the validation set using the F1-score as the evaluation metric.

4.Prediction and Submission:

- Applied the trained model to the test set to generate predictions for each patient.
- Submitted the final predictions in the 'final_submission.csv' file.