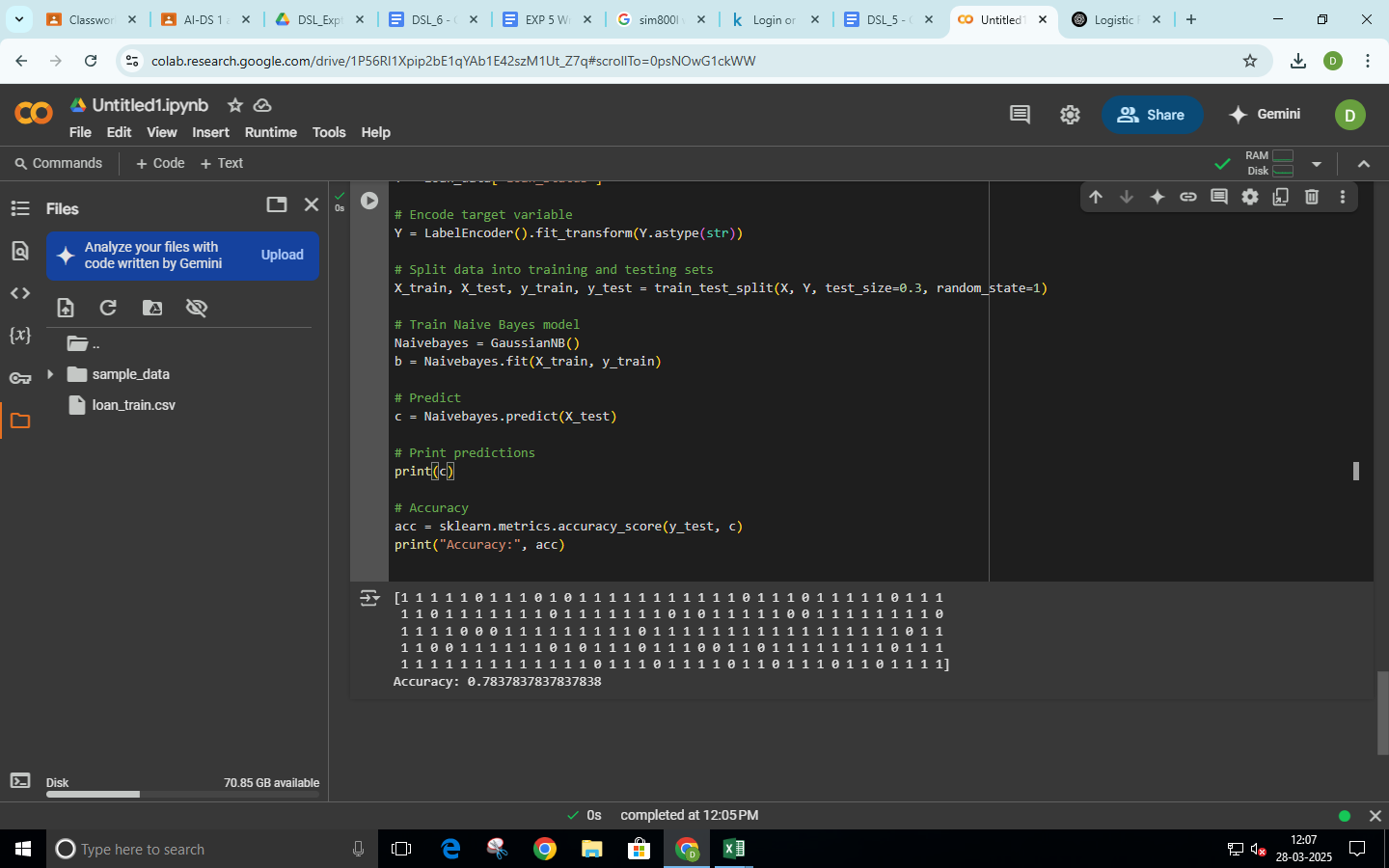
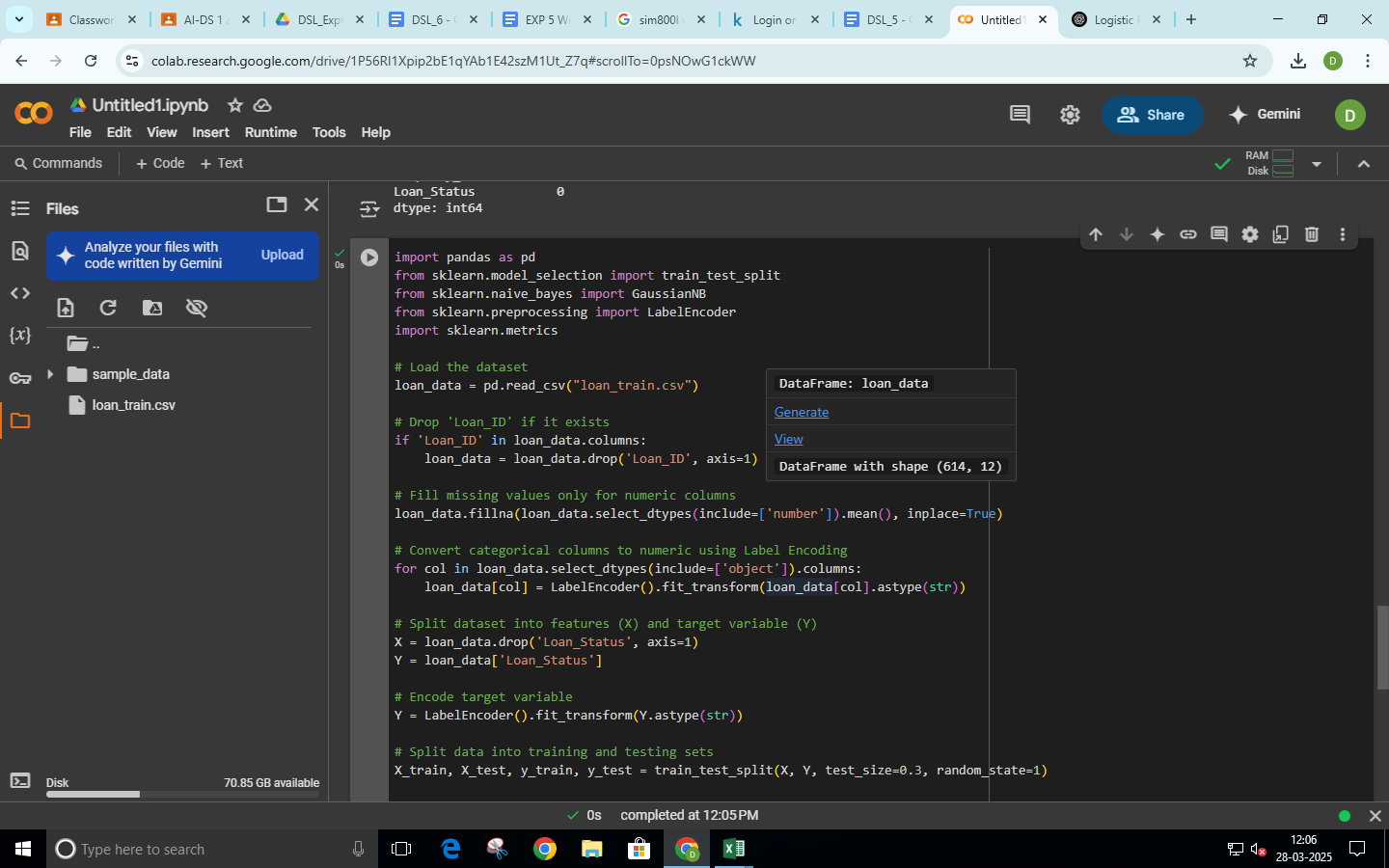
**B. Paste Screenshots of above commands.**

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**POST-EXPERIMENT EXERCISE:**

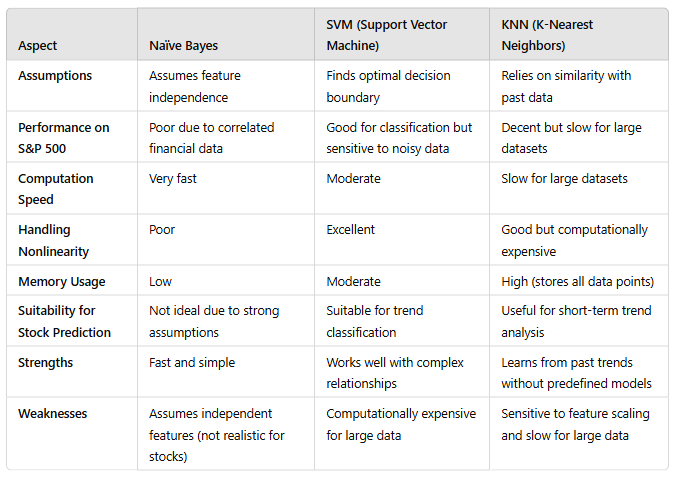
1. **Types of classification.**

**ANS:**

1. **Binary Classification** – Categorizes data into two distinct groups (e.g., Spam or Not Spam).
2. **Multi-Class Classification** – Assigns data to one of multiple classes (e.g., Dog, Cat, or Bird).
3. **Multi-Label Classification** – Allows data to have multiple labels (e.g., A movie classified as Action and Comedy).
4. **Imbalanced Classification** – Deals with datasets where one class is significantly underrepresented (e.g., Fraud Detection).
5. **Ordinal Classification** – Uses ranked categories where order matters (e.g., Ratings: Poor, Average, Good, Excellent).
6. **Hard vs. Soft Classification** – Hard assigns one definite class, while soft gives probabilities for multiple classes.
7. **Generative vs. Discriminative Classification** – Generative models learn data distribution (e.g., Naïve Bayes), while discriminative models focus on decision boundaries (e.g., SVM, Logistic Regression).
8. **Hierarchical Classification** – Classifies data into structured categories, from general to specific (e.g., Animal → Mammal → Dog).

**B. Questions:**

1. **Compare S&P500 dataset with other classifiers SVM and KNN.**

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