Task 4: Logistic Regression - Breast Cancer Classification

Objective
To build a binary classification model using Logistic Regression to classify breast cancer tumors as malignant or benign.

Steps Performed
1. Loaded and cleaned the dataset.
2. Selected features and mapped target variable (M=1, B=0).
3. Split dataset into train and test sets.
4. Standardized the features.
5. Trained a Logistic Regression model.
6. Evaluated performance using:
   - Confusion Matrix
   - Classification Report (Precision, Recall, F1-score)
   - ROC Curve and AUC Score

Tools Used
- Python
- Pandas
- scikit-learn
- Matplotlib
- Seaborn

Files in This Repo
- `logistic_regression.py`: Model training and evaluation code.
- `confusion_matrix.png`: Heatmap of classification results.
- `roc_curve.png`: ROC Curve plot.

Dataset Source
[Kaggle - Breast Cancer Wisconsin Dataset](https://www.kaggle.com/datasets/uciml/breast-cancer-wisconsin-data)

Submission
Upload all files to your GitHub repository and submit the repository link in the given form.