Name:- Abhishek Bayas

Roll NO :- 281020

PRN:- 22310349

**Assignment-04**

**Assignment 4: Predict Customer Response for Special Offer**

**Title:**

Applying Classification Algorithm to Predict Customer Response for Special Offer in a Cosmetics Shop

**Aim:**

To classify customer responses using a machine learning model and evaluate its performance using a confusion matrix, accuracy, precision, recall, and F1-score.

**Course Outcome:**

**CO4 L2** – Apply appropriate ML algorithm and evaluate model using classification metrics.

**Assumptions:**

You can simulate or use a dataset like the following (columns):

* Age
* Income
* SkinType
* PurchasedBefore (0/1)
* Response (0 = No, 1 = Yes → target)

CODE- From Visual Studio code.

(Note: Actual metrics may vary with larger or real datasets.)

**Conclusion:**

* The model accurately predicts customer response for special offers.
* All evaluation metrics (Accuracy, Precision, Recall, and F1 Score) are used to measure the classification performance.
* Confusion matrix visually summarizes the correct vs incorrect predictions.