1. Clustering Project

Customer_ID	Name	Age	Purchase_Amount	Segment
1	Ali	25	1200	High Spender
2	Sara	34	800	Low Spender
3	Ahmed	22	600	Low Spender
4	Zara	29	1500	High Spender
5	Osman	40	300	Low Spender
6	Ayes ha	31	1800	High Spender
7	Bill	27	700	Low Spender
8	Eina	35	2000	High Spender

2. Anomaly Detection Project

Customer Id	Monthly Spending	Z-Score	Anomaly
1	52.48	0.29	Normal
2	49.30	-0.001	Normal
3	53.38	0.36	Normal
4	57.61	0.77	Normal
5	48.83	-0.045	Normal
6	48.83	-0.045	Normal
7	57.90	0.79	Normal
8	53.83	0.41	Normal
9	47.65	-0.15	Normal
10	52.71	0.31	Normal
11	47.68	-0.15	Normal
12	47.67	-0.15	Normal
13	51.21	-0.17	Normal
14	40.43	-1.08	Normal
15	41.38	-0.73	Normal
16	47.19	-0.19	Normal
17	20	-2.71	Anomaly
18	95	4.22	Anomaly
19	10	-3.64	Anomaly
20	100	4.69	Anomaly
21	5	-4.10	Anomaly

3. Dimensional Project 1

Student	Math	Science	English	PCA 1	PCA 2
A	85	88	78	84.8	82.4
B	70	65	72	68.4	69.5
C	90	92	89	90.6	90.1
D	60	58	65	60.2	61.9
E	80	79	84	80.4	81.7

4. Dimensional Project 2

Original Data - 3D
(Math, Science, English)

Reduced Data - 2D via PCA
(PC1 (Main), PC2 (Support))

- Graphs show transformation from 3D data into 2D using PCA.
- Red dots represent student data points in reduced dimensions.

5. Dimensional Project 3

Graph on Left: Original Data (3D)
Axes: Math, Science, English

Graph on Right: Reduced Data (2D) via PCA
Axes: PC1, PC2

- Shows dimensional reduction from 3D to 2D for better visualization.

6. Dimensional Project 4

Student	Math	Science	English	PC1 (Main Skill)	PC2 (Support Skill)
A	85	90	80	85.5	4.8
B	78	75	72	74.5	3.6
C	92	88	94	91	4.2
D	88	85	86	86	4.1
E	76	70	74	73.5	3.4