EX-1: Load a real-world dataset (CSV/JSON) into a Pandas DataFrame and inspect its structure using .head(), .info(), .shape, and .describe().

E-COMMERCE Website DATA Set.

Aim

To load the May 2022 E-Commerce Product Pricing dataset (CSV) into a Pandas DataFrame and examine its structure using the `.head()`, `.info()`, `.shape`, and `.describe()` methods.

Algorithm

Step 1: Start the program.

Step 2: Import the **Pandas** library, which is a Python library used for data manipulation and analysis.

Step 3: Read the **E-commerce CSV dataset** using the `pd.read_csv()` function, which loads the CSV file into a **DataFrame** (a two-dimensional table with rows and columns).

Step 4: Display the first five records of the dataset using the `.head()` method to get a quick overview of the data.

Step 5: Use the `.info()` method to view information about the dataset, such as column names, data types, and the number of non-null values.

Step 6: Use the `.shape` attribute to display the dimensions of the dataset (number of rows and columns).

Step 7: Use the `.describe()` method to generate summary statistics such as count, mean, standard deviation, minimum, maximum, and quartile values for numerical columns.

Step 8: Analyze the displayed information to understand the structure and characteristics of the E-commerce dataset.

Step 9: Stop the program.

Exploratory Data Analysis (EDA)

DATA SET

EDA-Ex-1.csv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	index	Sku	Style Id	Catalog	Category	Weight	TP	MRP Old	Final MRP	Ajio MRP	Amazon M	Amazon F	Flipkart M	Limeroad	Myntra M	Paytm MR	Snapdeal MRP	
2	0	Os206_31	Os206_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
3	1	Os206_31	Os206_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
4	2	Os206_31	Os206_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
5	3	Os206_31	Os206_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
6	4	Os206_31	Os206_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
7	5	Os206_31	Os206_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
8	6	Os223_31	Os223_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
9	7	Os223_31	Os223_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
10	8	Os223_31	Os223_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
11	9	Os223_31	Os223_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
12	10	Os223_31	Os223_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
13	11	Os223_31	Os223_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
14	12	Os212_31	Os212_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
15	13	Os212_31	Os212_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
16	14	Os212_31	Os212_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
17	15	Os212_31	Os212_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
18	16	Os212_31	Os212_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
19	17	Os212_31	Os212_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	

EDA-Ex-1.csv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
20	18	Os214_31	Os214_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
21	19	Os214_31	Os214_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
22	20	Os214_31	Os214_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
23	21	Os214_31	Os214_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
24	22	Os214_31	Os214_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
25	23	Os214_31	Os214_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
26	24	Os207_31	Os207_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
27	25	Os207_31	Os207_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
28	26	Os207_31	Os207_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
29	27	Os207_31	Os207_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
30	28	Os207_31	Os207_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
31	29	Os207_31	Os207_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
32	30	Os202_31	Os202_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
33	31	Os202_31	Os202_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
34	32	Os202_31	Os202_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
35	33	Os202_31	Os202_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
36	34	Os202_31	Os202_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
37	35	Os202_31	Os202_31	Moments	Kurta	0.3	538	2178	2295	2295	2295	2295	2295	2295	2295	2295	2295	
38	36	Os181_50	Os181_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	

EDA-Ex-1.csv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
39	37	Os181_50	Os181_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
40	38	Os181_50	Os181_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
41	39	Os181_50	Os181_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
42	40	Os181_50	Os181_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
43	41	Os181_50	Os181_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
44	42	Os191_50	Os191_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
45	43	Os191_50	Os191_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
46	44	Os191_50	Os191_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
47	45	Os191_50	Os191_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
48	46	Os191_50	Os191_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
49	47	Os191_50	Os191_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
50	48	Os197_50	Os197_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	
51	49	Os197_50	Os197_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	
52	50	Os197_50	Os197_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	
53	51	Os197_50	Os197_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	
54	52	Os197_50	Os197_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	
55	53	Os197_50	Os197_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	
56	54	OS219_50	OS219_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
57	55	OS219_50	OS219_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
58	56	OS219_50	OS219_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
59	57	OS219_50	OS219_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
60	58	OS219_50	OS219_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
61	59	OS219_50	OS219_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
62	60	Os195_50	Os195_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
63	61	Os195_50	Os195_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
64	62	Os195_50	Os195_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
65	63	Os195_50	Os195_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
66	64	Os195_50	Os195_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
67	65	Os195_50	Os195_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
68	66	Os189_50	Os189_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
69	67	Os189_50	Os189_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
70	68	Os189_50	Os189_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
71	69	Os189_50	Os189_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
72	70	Os189_50	Os189_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
73	71	Os189_50	Os189_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
74	72	Os182_50	Os182_50	Colors-8	Kurta	0.3	438	1895	254	1895	1895	1895	1895	1895	1895	1895	1895	
75	73	Os182_50	Os182_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	
76	74	Os182_50	Os182_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
77	75	Os182_50	Os182_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	
78	76	Os182_50	Os182_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	
79	77	Os182_50	Os182_50	Colors-8	Kurta	0.3	438	1895	1895	1895	1895	1895	1895	1895	1895	1895	1895	
80	78	Os209_50	Os209_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
81	79	Os209_50	Os209_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
82	80	Os209_50	Os209_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
83	81	Os209_50	Os209_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
84	82	Os209_50	Os209_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
85	83	Os209_50	Os209_50	Colors-8	Kurta	0.3	438	1778	1895	1895	1895	1895	1895	1895	1895	1895	1895	
86	84	Os218_31	Os218_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
87	85	Os218_31	Os218_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
88	86	Os218_31	Os218_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
89	87	Os218_31	Os218_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
90	88	Os218_31	Os218_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
91	89	Os218_31	Os218_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
92	90	Os201_31	Os201_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
93	91	Os201_31	Os201_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
94	92	Os201_31	Os201_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
95	93	Os201_31	Os201_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
96	94	Os201_31	Os201_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
97	95	Os201_31	Os201_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
98	96	Os175_31	Os175_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
99	97	Os175_31	Os175_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
100	98	Os175_31	Os175_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
101	99	Os175_31	Os175_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
102	100	Os175_31	Os175_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
103	101	Os175_31	Os175_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
104	102	Os220_31	Os220_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
105	103	Os220_31	Os220_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
106	104	Os220_31	Os220_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
107	105	Os220_31	Os220_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
108	106	Os220_31	Os220_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
109	107	Os220_31	Os220_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
110	108	Os174_31	Os174_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
111	109	Os174_31	Os174_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
112	110	Os174_31	Os174_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
113	111	Os174_31	Os174_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
114	112	Os174_31	Os174_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
115	113	Os174_31	Os174_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
116	114	Os222_31	Os222_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
117	115	Os222_31	Os222_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
118	116	Os222_31	Os222_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
119	117	Os222_31	Os222_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
120	118	Os222_31	Os222_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
121	119	Os222_31	Os222_31	Breeze-4	Kurta	0.3	505	2038	2195	2195	2195	2195	2195	2195	2195	2195	2195	
122	120	Os228_14	Os228_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
123	121	Os228_14	Os228_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
124	122	Os228_14	Os228_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
125	123	Os228_14	Os228_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
126	124	Os228_14	Os228_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
127	125	Os228_14	Os228_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
128	126	Os227_14	Os227_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
129	127	Os227_14	Os227_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
130	128	Os227_14	Os227_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
131	129	Os227_14	Os227_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
132	130	Os227_14	Os227_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
133	131	Os227_14	Os227_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	

EDA-Ex-1.csv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
134	132	OS224_14	OS224_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
135	133	OS224_14	OS224_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
136	134	OS224_14	OS224_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
137	135	OS224_14	OS224_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
138	136	OS224_14	OS224_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
139	137	OS224_14	OS224_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
140	138	Os232_14	Os232_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
141	139	Os232_14	Os232_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
142	140	Os232_14	Os232_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
143	141	Os232_14	Os232_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
144	142	Os232_14	Os232_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
145	143	Os232_14	Os232_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
146	144	Os226_14	Os226_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
147	145	Os226_14	Os226_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
148	146	Os226_14	Os226_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
149	147	Os226_14	Os226_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
150	148	Os226_14	Os226_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
151	149	Os226_14	Os226_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	
152	150	Os230_14	Os230_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495	

EDA-Ex-1.csv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
153	151	Os230_14	Os230_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
154	152	Os230_14	Os230_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
155	153	Os230_14	Os230_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
156	154	Os230_14	Os230_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
157	155	Os230_14	Os230_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
158	156	Os225_14	Os225_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
159	157	Os225_14	Os225_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
160	158	Os225_14	Os225_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
161	159	Os225_14	Os225_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
162	160	Os225_14	Os225_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
163	161	Os225_14	Os225_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
164	162	Os229_14	Os229_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
165	163	Os229_14	Os229_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
166	164	Os229_14	Os229_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
167	165	Os229_14	Os229_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
168	166	Os229_14	Os229_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
169	167	Os229_14	Os229_14	Rozana	Kurta Set	0.4	590	2378	2495	2495	2495	2495	2495	2495	2495	2495	2495
170	168	Os200_50	Os200_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
171	169	Os200_50	Os200_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595

EDA-Ex-1.csv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
172	170	Os200_50	Os200_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
173	171	Os200_50	Os200_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
174	172	Os200_50	Os200_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
175	173	Os200_50	Os200_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
176	174	Os188_50	Os188_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
177	175	Os188_50	Os188_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
178	176	Os188_50	Os188_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
179	177	Os188_50	Os188_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
180	178	Os188_50	Os188_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
181	179	Os188_50	Os188_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
182	180	Os208_50	Os208_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
183	181	Os208_50	Os208_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
184	182	Os208_50	Os208_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
185	183	Os208_50	Os208_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
186	184	Os208_50	Os208_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
187	185	Os208_50	Os208_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
188	186	Os183_50	Os183_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
189	187	Os183_50	Os183_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595
190	188	Os183_50	Os183_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595

EDA-Ex-1.csv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
191	189	Os183_50	Os183_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595	
192	190	Os183_50	Os183_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595	
193	191	Os183_50	Os183_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595	
194	192	Os198_50	Os198_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595	
195	193	Os198_50	Os198_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595	
196	194	Os198_50	Os198_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595	
197	195	Os198_50	Os198_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595	
198	196	Os198_50	Os198_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595	
199	197	Os198_50	Os198_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595	
200	198	Os199_50	Os199_50	Colors-7	Kurta	0.3	381	1538	1595	1595	1595	1595	1595	1595	1595	1595	1595	
201																		
202																		

Exploratc

Procedure

1. Open the **Kaggle** website and search for a suitable **E-Commerce Product Pricing Dataset**.
2. Download the dataset in **CSV (Comma-Separated Values)** format.
3. Open the downloaded dataset and verify the records and column names.
4. Select the required number of records (198 rows) from the original dataset for easy analysis and save it as a new CSV file.
5. Open **Jupyter Notebook**, **Google Colab**, or any Python IDE.
6. Import the **Pandas** library using the `import pandas as pd` statement.
7. Load the CSV dataset into a Pandas DataFrame using the `pd.read_csv()` function.
8. Verify that the dataset has been loaded successfully.
9. Perform Exploratory Data Analysis (EDA) operations such as `.head()`, `.info()`, `.shape`, and `.describe()`.
10. Observe and analyze the output obtained from each operation.

Python Program :

Program 1: Load the Dataset

Program

```
# Import Pandas library
import pandas as pd

# Load the dataset
df = pd.read_csv("EDA-Ex-1.csv")

# Display the dataset
print(df)
```

Output:

```
IDLE Shell 3.13.1
File  Edit  Shell  Debug  Options  Window  Help
Python 3.13.1 (tags/v3.13.1:0671451, Dec  3 2024, 19:06:28) [MSC v.1942 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========================= RESTART: D:/EDA/EX-1-LOAD.PY =========================
     index             Sku    Style Id  ... Myntra MRP Paytm MRP  Snapdeal MRP
0        0    Os206_3141_S  Os206_3141  ...       2295      2295          2295
1        1    Os206_3141_M  Os206_3141  ...       2295      2295          2295
2        2    Os206_3141_L  Os206_3141  ...       2295      2295          2295
3        3   Os206_3141_XL  Os206_3141  ...       2295      2295          2295
4        4  Os206_3141_2XL  Os206_3141  ...       2295      2295          2295
..     ...             ...         ...  ...        ...       ...           ...
194    194    Os198_5045_L  Os198_5045  ...       1595      1595          1595
195    195   Os198_5045_XL  Os198_5045  ...       1595      1595          1595
196    196  Os198_5045_2XL  Os198_5045  ...       1595      1595          1595
197    197  Os198_5045_3XL  Os198_5045  ...       1595      1595          1595
198    198    Os199_5046_S  Os199_5046  ...       1595      1595          1595

[199 rows x 17 columns]
>>>
```

Program 2: Display the First Five Records (.head())

Program

```
# Import Pandas library
import pandas as pd

# Load the dataset
df = pd.read_csv("EDA-Ex-1.csv")

# Display the first five records
print(df.head())
```

Output:

```
>>>
========================================================== RESTART: D:/EDA/EX-1-DISPLAY-FIRST5.PY ==============
   index             Sku    Style Id  ... Myntra MRP Paytm MRP  Snapdeal MRP
0      0    Os206_3141_S  Os206_3141  ...       2295      2295          2295
1      1    Os206_3141_M  Os206_3141  ...       2295      2295          2295
2      2    Os206_3141_L  Os206_3141  ...       2295      2295          2295
3      3   Os206_3141_XL  Os206_3141  ...       2295      2295          2295
4      4  Os206_3141_2XL  Os206_3141  ...       2295      2295          2295

[5 rows x 17 columns]
>>>
```

Program 3: Display the Last Five Records (.tail())

Program

```
# Import Pandas library
import pandas as pd

# Load the dataset
df = pd.read_csv("EDA-Ex-1.csv")

# Display the last five records
print(df.tail())
```

Output:

```
========================================================== RESTART: D:/EDA/EX-1-DISPLAY-LAST5.PY ==========
     index             Sku    Style Id  ... Myntra MRP Paytm MRP  Snapdeal MRP
194    194    Os198_5045_L  Os198_5045  ...       1595      1595          1595
195    195   Os198_5045_XL  Os198_5045  ...       1595      1595          1595
196    196  Os198_5045_2XL  Os198_5045  ...       1595      1595          1595
197    197  Os198_5045_3XL  Os198_5045  ...       1595      1595          1595
198    198    Os199_5046_S  Os199_5046  ...       1595      1595          1595

[5 rows x 17 columns]
>>>
```

Laboratory Data Analy- -DA)

Program 4: Display Dataset Information (.info())

Program

```
# Import Pandas library
import pandas as pd

# Load the dataset
df = pd.read_csv("EDA-Ex-1.csv")

# Display dataset information
df.info()
```

Output:

```
>>>
========================================================== RESTART: D:/EDA/EX-1-DATASET-INFO.py ======================
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 199 entries, 0 to 198
Data columns (total 17 columns):
 #   Column          Non-Null Count  Dtype
---  ------          --------------  -----
 0   index           199 non-null    int64
 1   Sku             199 non-null    object
 2   Style Id        199 non-null    object
 3   Catalog         199 non-null    object
 4   Category        199 non-null    object
 5   Weight          199 non-null    float64
 6   TP              199 non-null    int64
 7   MRP Old         199 non-null    int64
 8   Final MRP Old   199 non-null    int64
 9   Ajio MRP        199 non-null    int64
 10  Amazon MRP      199 non-null    int64
 11  Amazon FBA MRP  199 non-null    int64
 12  Flipkart MRP    199 non-null    int64
 13  Limeroad MRP    199 non-null    int64
 14  Myntra MRP      199 non-null    int64
 15  Paytm MRP       199 non-null    int64
 16  Snapdeal MRP    199 non-null    int64
dtypes: float64(1), int64(12), object(4)
memory usage: 26.6+ KB
>>>
```

Program 5: Display Dataset Dimensions (.shape)

Program

```
# Import Pandas library
import pandas as pd

# Load the dataset
df = pd.read_csv("EDA-Ex-1.csv")

# Display the number of rows and columns
print(df.shape)
```

Output:

```
============================
(199, 17)
>>>
```

Exploratory Data (EDA)

Program 6: Display Statistical Summary (.describe())

Program

```
# Import Pandas library
import pandas as pd

# Load the dataset
df = pd.read_csv("EDA-Ex-1.csv")

# Display statistical summary
print(df.describe())
```

Output:

```
========================================================== RESTART: D:/EDA/EX-1-SATISTICAL.PY =
             index      Weight  ...    Paytm MRP  Snapdeal MRP
count  199.000000  199.000000  ...   199.000000    199.000000
mean    99.000000    0.324121  ...  2119.623116   2119.623116
std     57.590508    0.042889  ...   310.012599    310.012599
min      0.000000    0.300000  ...  1595.000000   1595.000000
25%     49.500000    0.300000  ...  1895.000000   1895.000000
50%     99.000000    0.300000  ...  2195.000000   2195.000000
75%    148.500000    0.300000  ...  2295.000000   2295.000000
max    198.000000    0.400000  ...  2495.000000   2495.000000

[8 rows x 13 columns]
>>>
```

Exploratory Data A... (EDA)

Result

Thus, the May 2022 E-Commerce Product Pricing dataset was successfully loaded into a Pandas DataFrame, and its structure, dimensions, and statistical summary were analyzed using Pandas functions.

Exploratory Data Analysis (EDA)