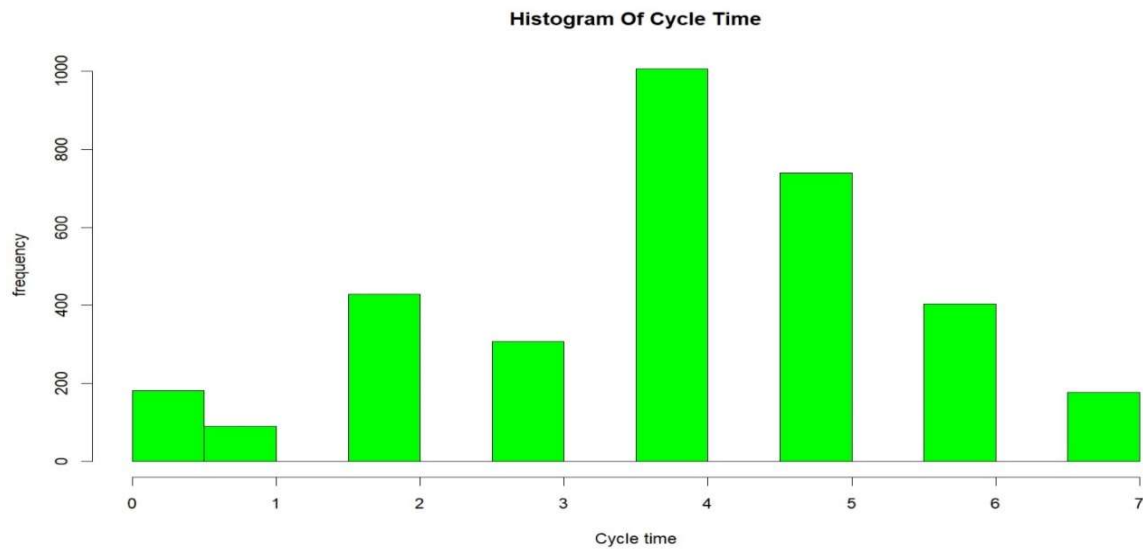


Descriptive Analysis

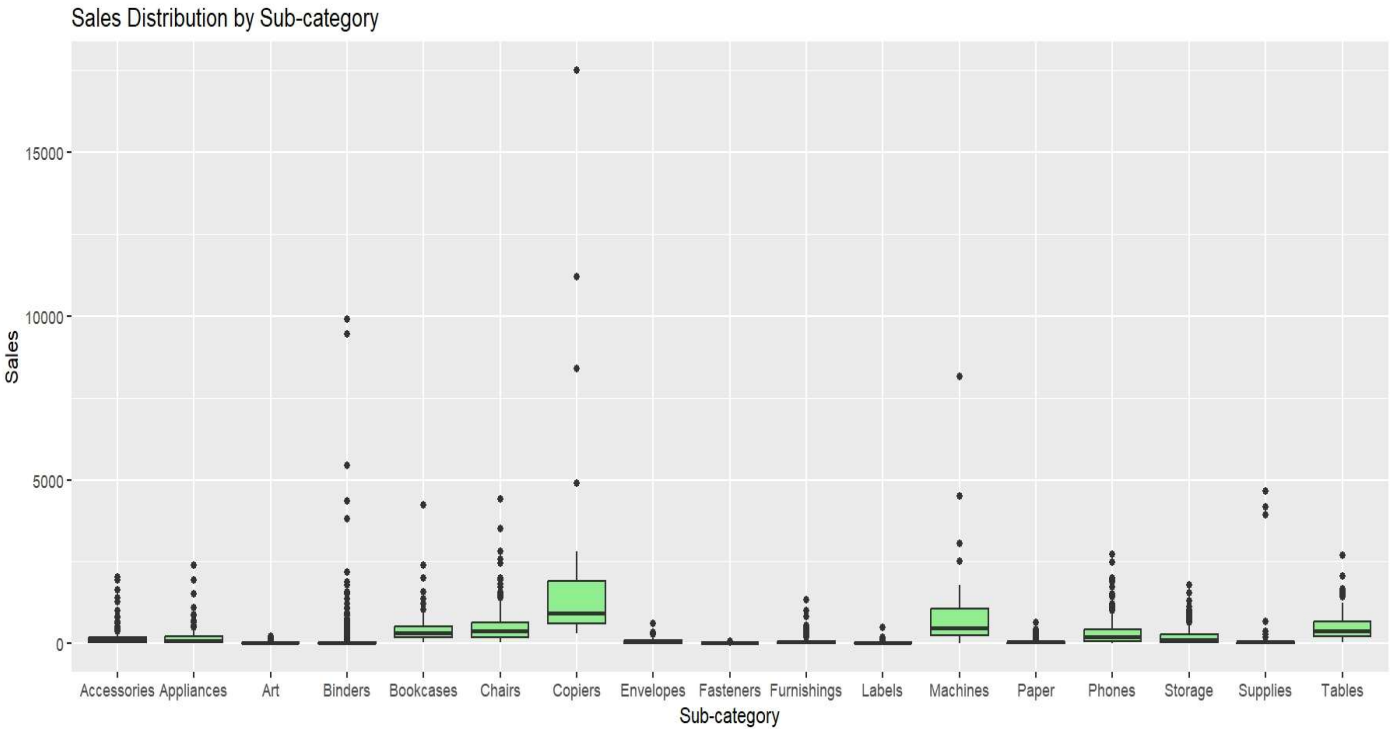
1)



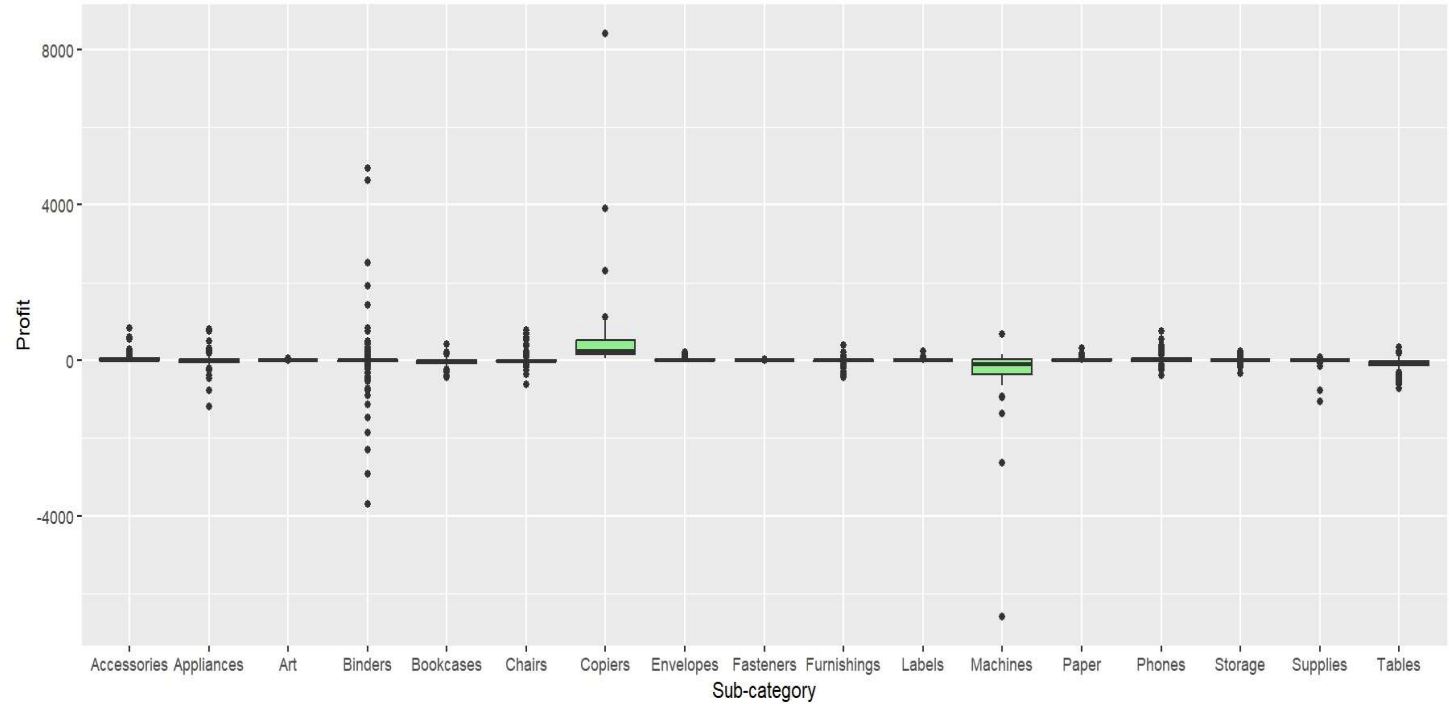
Analysis:

In the histogram, the x-axis represents the cycle time, and the y-axis represents the frequency. Using the statistical measures, I calculated the mean and median values of the cycle time. The mean value of the cycle time is equal to 3.97 and the median value is 4, respectively. I determined the skewness to be -0.503960. With the mean less than the median, we can conclude the histogram is skewed to the left.

2)Sales vs Sub-Category box plot Analysis:



Profit Distribution by Sub-category



S.no	Sub-category	Total Sales	Total Profit
1	Accessories	41668.646	8488.3099
2	Appliances	30855.613	-1717.6656
3	Art	7181.170	1371.6032
4	Binders	83041.042	-2387.5516
5	Bookcases	43538.947	-4221.0298
6	Chairs	114100.276	3949.9499
7	Copiers	70899.160	23541.7695
8	Envelopes	6179.912	2302.9883
9	Fasteners	1043.510	300.8329
10	Furnishings	22881.360	-3375.4286
11	Labels	2976.742	1251.7689
12	Machines	37335.424	-15476.2569
13	Paper	20776.442	8118.0401
14	Phones	106740.142	5937.2413
15	Storage	56208.122	1051.4265
16	Supplies	15178.452	-1929.2208
17	Tables	78294.431	-14585.0305

Analysis:

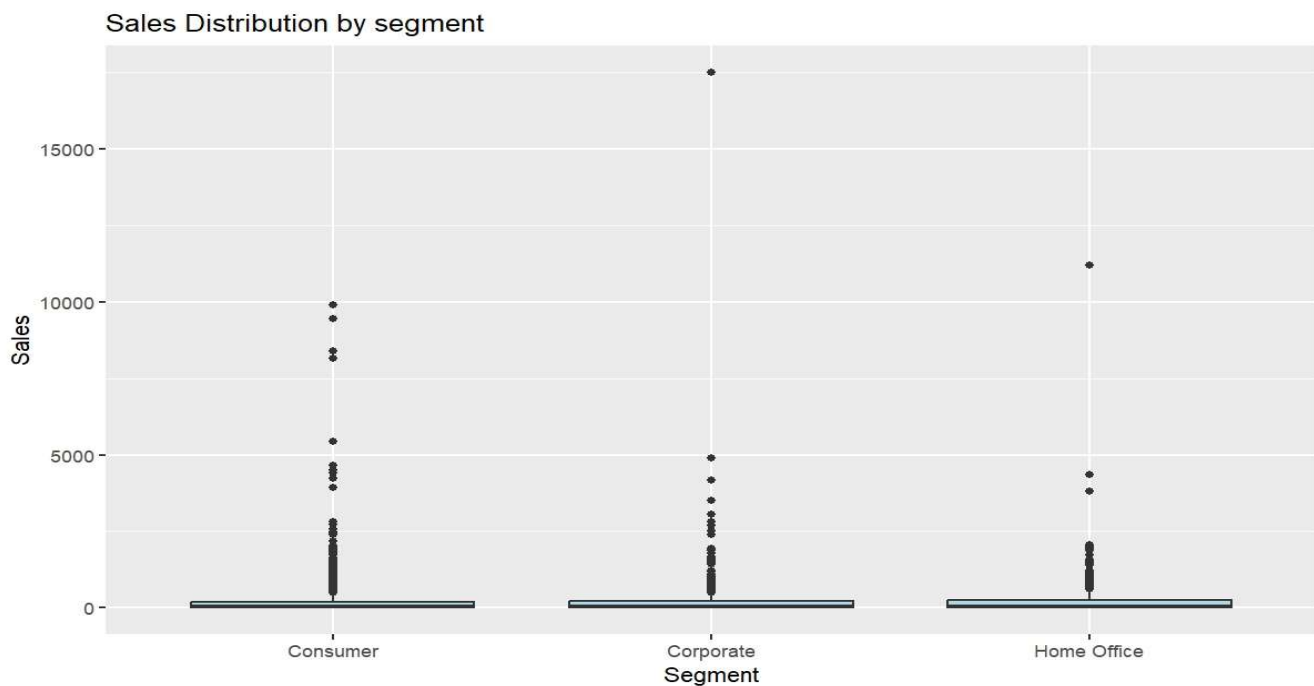
The sales vs sub-category box plot determines that the median value for copiers is comparatively higher than for machines and tables. The median value of copiers is 899.98. While other sub-categories are comparatively smaller when compared to copiers, machines and tables.

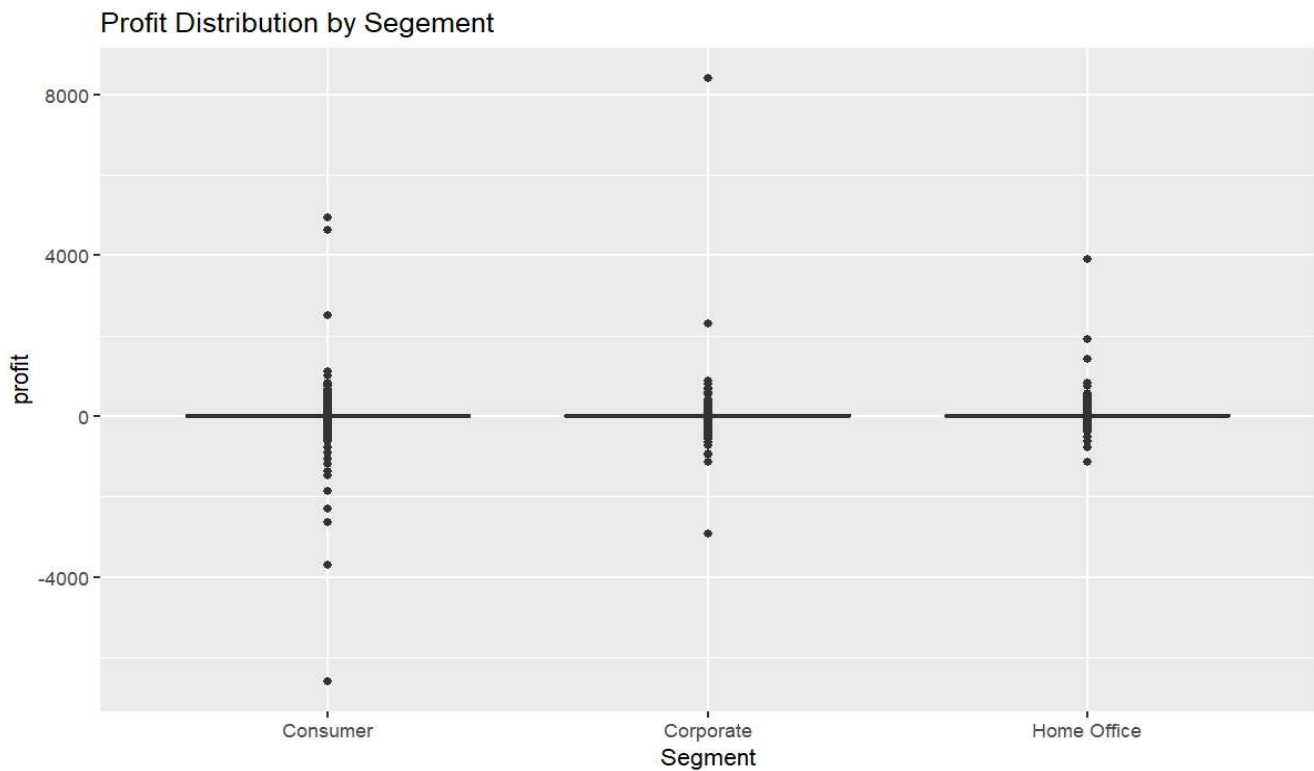
The x-axis represents the sub-categories, and the y-axis represents the sales of the sub-categories. The subcategories exhibit varying patterns in sales. Chairs have the highest number of sales, which is equal to \$114100.276, and fasteners have the lowest number of sales, which is equal to \$1043.510.

The profit vs sub-category box plot determines that the median value for copiers is highest among all the subcategories. The x-axis represents the sub-categories, and the y-axis represents the profit of the sub-categories.

Copiers stand out with substantial profits of \$23,541.7695. In contrast, machines and tables show significant negative profits of -\$15,476.2569 (loss) and -\$14,585.0305(loss), indicating potential areas for improvement.

3)





Analysis:

Using the statistical measures, I calculated the total sales, total profit, median for sales, and median for profit across each segment.

S.no	Segment	Total Sales	Total profit
1	Consumer	378315.8	-7747.975
2	Corporate	222209.3	6268.901
3	Home Office	138374.2	14100.820

S.no	Segment	Median of Sales	Median of profit
1	Consumer	47.950	3.0016
2	Corporate	48.788	3.3524
3	Home Office	49.760	4.9648

The consumer segment has experienced a loss of \$7,747.975 while having the highest sales of \$3,78,315.8 among all the segments. When we investigated the sales of home office segments, even though sales are less compared to the consumer segment, they earned a good amount of total profit of \$14,100.82 with \$1,38,374.2 in sales.

Looking at median values, even though sales medians are similar, the home office segment has a higher median profit, indicating more consistency and better profitability in that segment.