Assignment 8

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Download all python codes from

https://github.com/satyasm45/Summer-Internship/ tree/main/Assignment-8/Codes

and latex-tikz codes from

https://github.com/satyasm45/Summer-Internship/ tree/main/Assignment-8

1 Question No. 2.64

In a legislative assembly election, a political group hired a public relations firm to promote its candidate in three ways: telephone, house calls, and letters. The cost per contact (in paise) is given in matrix $\bf A$ as

Cost per Contact(in Paise)

$$\mathbf{A} = \begin{pmatrix} 40 \\ 100 \\ 50 \end{pmatrix} \begin{pmatrix} \text{Telephone} \\ \text{Housecall} \\ \text{Letter} \end{pmatrix}$$
 (1.0.1)

The number of contacts of each type made in two cities X and Y is given by matrix B

Find the total amount spent by the group in the two cities X and Y

2 EXPLANATION

The total amount spent is given by=

$$\mathbf{BA} \qquad (2.0.1)$$

$$= \begin{pmatrix} 1000 & 500 & 5000 \\ 3000 & 1000 & 10000 \end{pmatrix} \begin{pmatrix} 40 \\ 100 \\ 50 \end{pmatrix}$$
 (2.0.2)

$$= \begin{pmatrix} 40000 + 50000 + 250000 \\ 120000 + 100000 + 500000 \end{pmatrix}$$
 (2.0.3)

TotalCost
$$\begin{pmatrix} 340000 \\ 720000 \end{pmatrix} \begin{pmatrix} X \\ Y \end{pmatrix}$$
 (2.0.4)

:. the total amount spent in city X and city Y is 3400 and 7200 Rupees respectively.

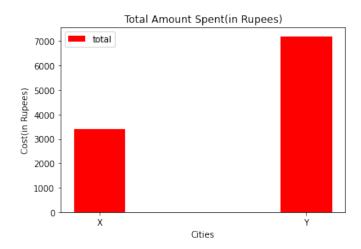


Fig. 2.1: Total Amount Spent by the group in cities X and Y