

## Problem Statement Problem solving application.

## **Graph applications**

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## Statement of the problem addressed:

Amazon is a delivery company that is actively seeking solutions to optimize its operations and reduce costs. It faces multiple challenges that require attention and innovative solutions. One of the main challenges is the high expense associated with employee pay, which depends mainly on the route and distance traveled during deliveries. To address this challenge, Amazon intends to develop a program that calculates the minimum amount of money an employee should receive when moving from one location to another. This program will also provide the most efficient route for the employee to follow, ensuring that they reach their destination while minimizing costs.

Furthermore, the owners of the company recognize the importance of assessing the reach and number of contacts each person has before considering their promotion to another position. They need to understand an employee's network of contacts and influence within the organization before assigning them additional responsibilities.

To address this additional challenge, Amazon plans to develop a program that collects and analyzes data on employees' contacts and relationship networks. By gaining insights into the extent and influence of each employee's contacts, the company owners can make informed decisions about internal promotions, ensuring that roles and responsibilities are assigned based not only on skills and performance but also on the employee's valuable network of contacts within the organization.

Through these initiatives, Amazon aims to improve its overall operational efficiency, minimize costs associated with employee payments, and make informed promotion decisions based on employees' contacts and relationships.