Jaypee Institute of Information Technology, Noida



**ALGORITHMS AND PROBLEM SOLVING LAB**

**Semester** : IV

**Batch** : B2

**Students Details**:

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**INTRODUCTION**

Everyday he gets up early, set off on his truck to deliver goods to his customers. He has been working for 5 years now but he barely earns enough to earn a substantial amount of profit and sustain his family. All he need I to maximize his profit .

Rohit owns a transport company. Everyday ,he used to transport some goods to their respective owners.

After he has prepared all his orders he needs to transport the orders himself on his truck. We need to provide Rohit with a **root map** such that he can reach to all his customers using the **shortest rout**e in minimum distance to **save his expense** on petrol.

When he reaches his customers give him money and he needs to decide what denominations are required to return the change in **minimum number coins.**

We will try to solve his problem by minimising his efforts and make his needs realistic with the help of this project.

ALGORITHMS USED

1. Perfect Subset Sum Problem(using DP)
2. Weighted Average Method
3. Minimum Spanning Tree Problem
4. Coinage Problem(using DP)