BACKTRACKING ALGORITHMS ASSIGNMENT

Our cargo company has been contracted again to carry goods under the same payment conditions (10€/item) therefore the less trucks they use the better for benefits.
In this scenario, an oracle has told the CEO “You can take for granted that this service can be performed by means of just 3 lorries”. You are asked to provide a backtracking algorithm to choose goods to be carried in each truck in order to either find a solution or prove the oracle is wrong.

GROUP MEMBERS:

Surname1 Surname2, Name ID number (first student)

Surname1 Surname2, Name ID number (second student)

Surname1 Surname2, Name ID number (third student)

- Rough description of the main ideas of the algorithm to solve this problem as it would be explained to a class mate that does not know what a backtracking way of solving problems is
- Formal description of the backtracking algorithm that solves the problem, so previously identifying the key elements we have been working with in class.
    - Solution type of data: …
    - Exhaustivity: …
    - Dead Node condition (including backtracking condition)
    - Live Node condition
    - Solution Node condition
- Translation of the previous elements into pseudocode and, report of the computational cost of it.
- Implementation of that pseudocode into C programming language.

All the previous has to be typewritten in a memory file in pdf format. In addition you are expected to provide:

- C source file
- Executable file
- A plain text file including some representative examples to work with, in order to show the proper working of the solution provided by the group.