Optimal Lift Algorithm:

Modern day lift can change its directions only upon reaching either the top or the bottom floor. This may result in a lot of time and energy wastage in certain cases. Thus, certainly there is a need of more efficient algorithm that can optimise energy and time.

The algorithm used, finds all the possible paths connecting all people and reaching to the ground floor and finds the path in which the optimal value of time is obtained. It recursively calls itself until all the people has been included in the list .It keeps a record of the optimal value of time and the sequence of people required to reach there. The algorithm uses the basic idea of Depth First Search to find all possible solutions. In the algorithm used, the lift can reverse its directions without reaching ends which might be an important factor in deciding the optimal value.

The total time wasted for each person is calculated as the time difference between the moment the lift hits the ground floor and the time when he/she wants to start the journey.

-By H.A.T.S. OFF