Bash table is a kind of data structure that improves the efficiency of search algorithms such that the complexity will be O (1). Hash tables are made up of two main components: a table (an array) in which we store the data and a hash function that can map the inputs of the table to the integer space that are indices of that table. One of the most simple way to produce these integers is:

mod (summation of the ASCII characters that make the string, the size of the table)

The hash function may produce similar integer for different inputs and therefore they should be inserted in the same place in the table and this is called collision. In order to solve this problem, as I understood from the article, each cell of the table can be a linked list and since a linked list does not have any length limitation, it can solve the problem of collision. This solution is called separate chaining.

One situation that might limit the efficiency of hash table is that in which all the inputs hashed to the same value (it can happens when the hash table size is too small). In this scenario the complexity of search is not constant any more and it backs to O(n).