# Coalesced hashing

The example data here is from the [Wikipedia article](https://en.wikipedia.org/wiki/Coalesced_hashing).

Each column represents the state of the table at one time step. At each time step, a new data item has been inserted.

The blue cell represents the “collision bucket”, which is the next place a data item will be inserted when a collision occurs.

Data items are in red when they resulted in a collision when they were inserted. The number in parenthesis is the real hash address (the bucket that the item “wanted” to be in.)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** |  |  |  |  | ofu (8) | ofu | ofu | ofu | ofu | ofu |
| **1** |  |  |  |  |  | gcl (8) | gcl | gcl | gcl | gcl |
| **2** |  |  | qur | qur | qur | qur | qur | qur | qur | qur |
| **3** |  |  |  |  |  |  |  | clq (1) | clq | clq |
| **4** |  |  |  |  |  |  |  |  | ecd (8) | ecd |
| **5** |  |  |  | dim | dim | dim | dim | dim | dim | dim |
| **6** |  | aty | aty | aty | aty | aty | aty | aty | aty | aty |
| **7** |  |  |  |  |  |  | rhv | rhv | rhv | rhv |
| **8** | qrj | qrj | qrj | qrj | qrj | qrj | qrj | qrj | qrj | qrj |
| **9** |  |  |  |  |  |  |  |  |  | qsu (6) |