Software Engineering 2 Project

Design Document

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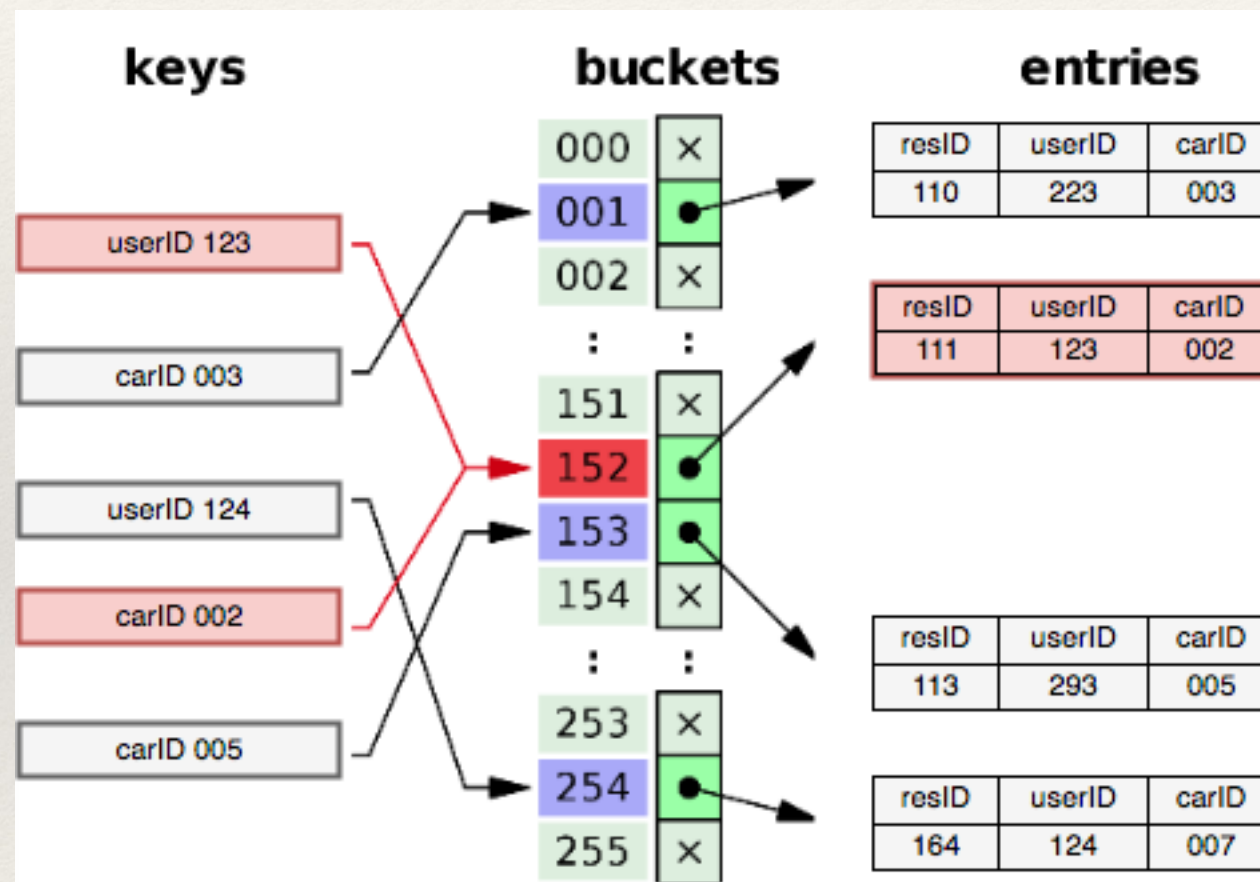# Algorithm Design

Object Relational Mapping and Searches

Component is asked to find a specific entity from an identifier.

For example the Reservation Component needs to find active Reservation Entity from a User ID or a Car ID.

In order to make this process more efficient we could introduce and HashMap to keep track of the active reservations.

This will avoid going back to the database every time and will result into a faster information retrieval and a overall better system performance.
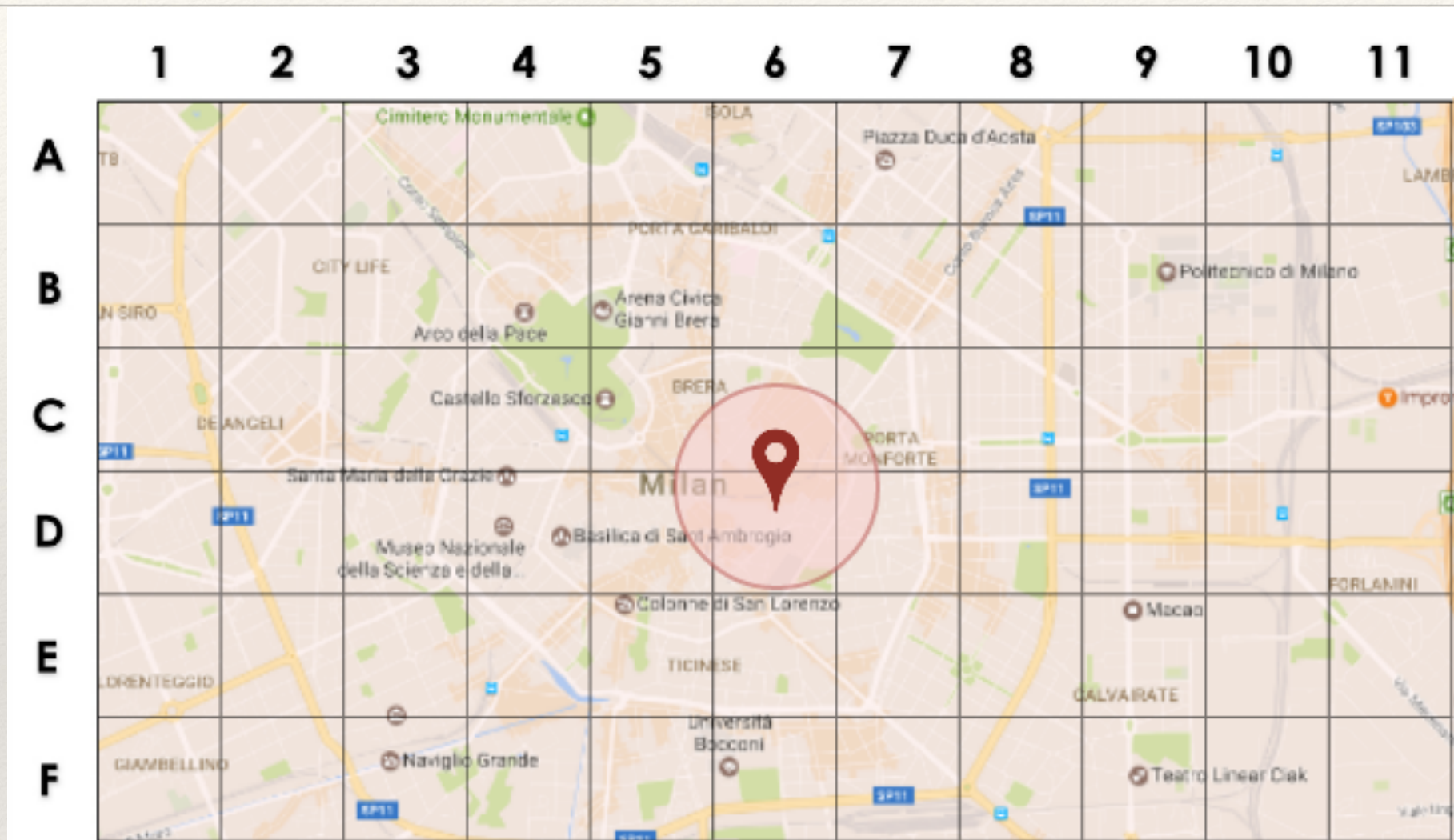
HashMap

Search On Map


```
badFindCars(position, range)
        FOR-EACH c:cars IN locationDB
                <create list L>
                p = c.getPosition()
                IF p in area(position, range)
                        <append c to L>
        return L
```

Search On Map


```
FindCars(position, range)
        <create list L>
        zones = <findZones from position,range>
        FOR-EACH c:cars IN zones
                p = c.getPosition()
                IF p in area(position, range)
                        <append c to L>
        return L
```