Subject: Regarding optional attributes and denormalisation
Posted by rksk16it on Thu, 06 Oct 2011 10:01:39 GMT
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Hi Tony

Though I am not a user of radicore or PHP, I read your articles often, and try to apply them in my own projects.

I was reading your article regarding normalisation and effective database design : http://www.tonymarston.net/php-mysql/database-design.html. And it was like 10th time I was reading it.

In the section of denormalisation, there is a sub-section about optional attributes that exist as a group : http:// www.tonymarston.net/php-mysql/database-design.html#optional. attributes. There you said the following :

R (K, A, B, C, X, Y, Z) where:

1. Attribute K is the primary key.
2. Attributes (A B C) exist all the time.
3. Attributes (X Y Z) exist some of the time (but always as a group under the same circumstances).
4. Attributes (X Y Z) require special processing.

After denormalising the result is two separate relations, as follows:

* R1 (K, A, B, C)
* R2 (K, X, Y, Z) where K is also the foreign key to R1

What I can see is that you said that breaking of the original relation 'R' into 'R1' and 'R2' is denormalisation. But I fail to see any single normalisation rule which is broken.

1st NF : No repeating groups
2nd NF : No partial dependencies
3rd NF : No transitive dependencies
BC NF : Every determinant is key
4th NF : No multivalued dependency (if R doesnt break it, then probably R1 and R2 also dont break it)
5th NF : Cannot be decomposed into furthur smaller relations. (Again if R doesnt break it, R1 and R2 probably also dont)
6th NF (No use discussing)

Also, from the application point of view, R1 can be seen as a class 'customers', and R2 can be as 'customers_with_arrears' which inherits 'customers' as it follows one-to-one relationship with some extra attributes, effectively increasing the specialisation (thus inheritance).

Thus it looks like a better design overall, and I cant see any denormalisation. I would be grateful if

you can help clarify it.

Thanks a lot