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CouchDB Project

Advanced database programming

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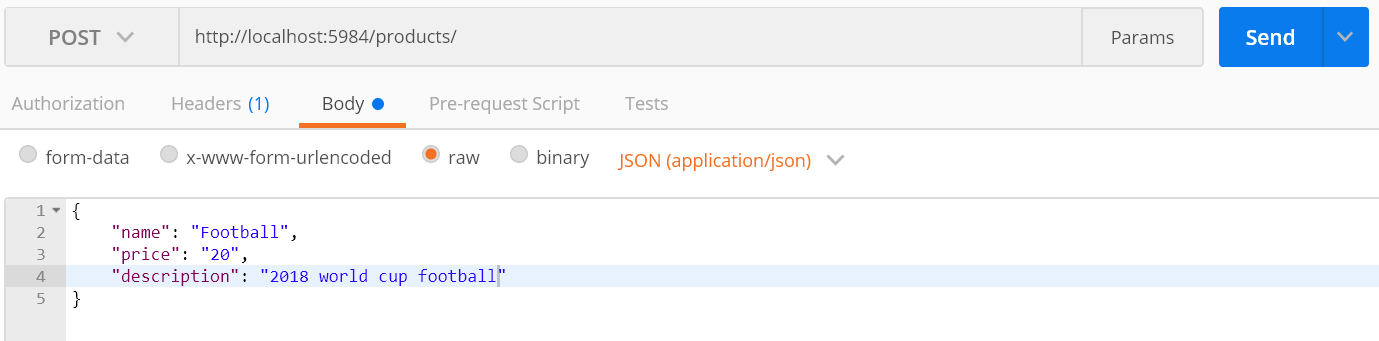
Introduction

My database is a simple database that allows a user to add products to a database that contains a Product name, price and description. CouchDB will be a good fit as it can store large amounts of products that will be easy to update and remove if the product is no longer available or a product has been purchased and the stock amount needs to be updated.

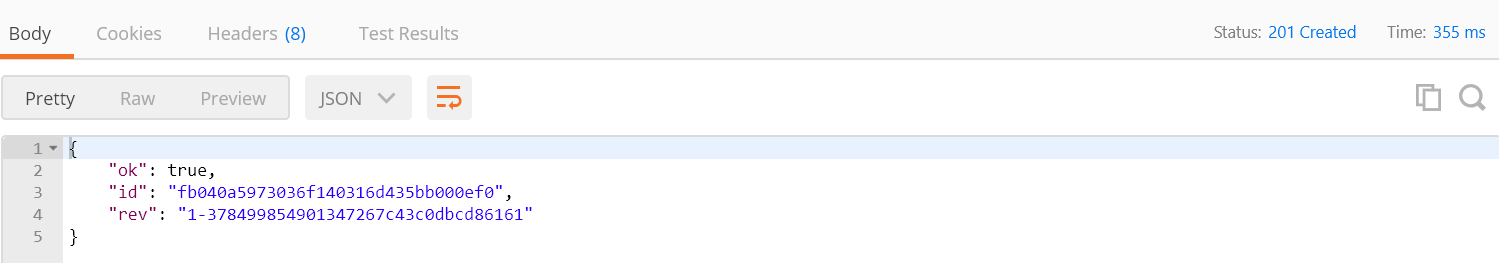
Question 1

Create:

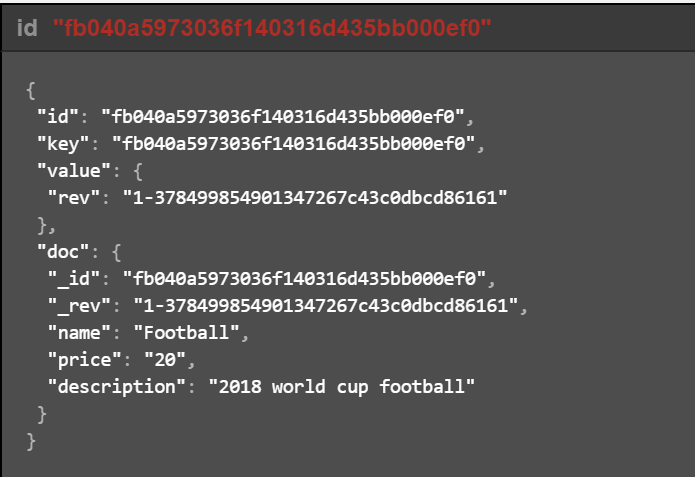
I used the REST API “Postman” which is a google chrome web app to preform my rest CRUD operations to my changes to my CouchDB database.



I entered a football product into the database and the json object was entered into the database successfully as you can see below:

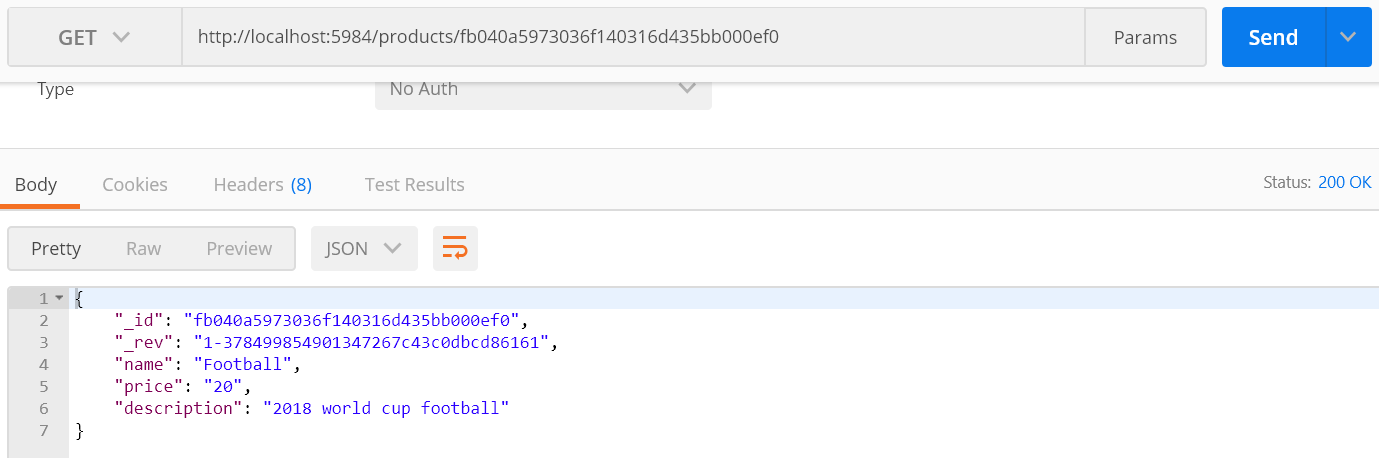


Here is an image of the product in my database with the id and revision number automatically generated:



Read:

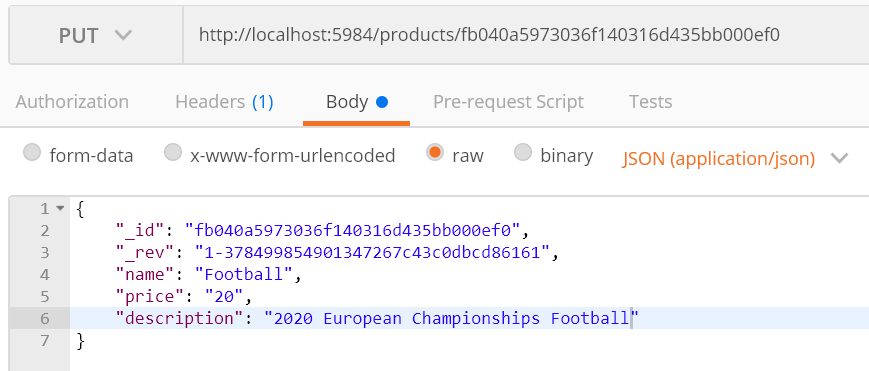
This will show a product is the database by is product ID number in the postman rest API:



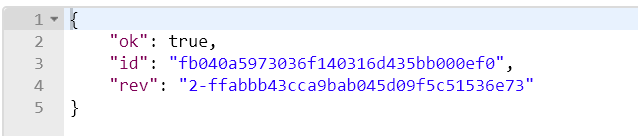
I had to use a GET command using the ID number of the product to get the information needed of the product from the database.

Update:

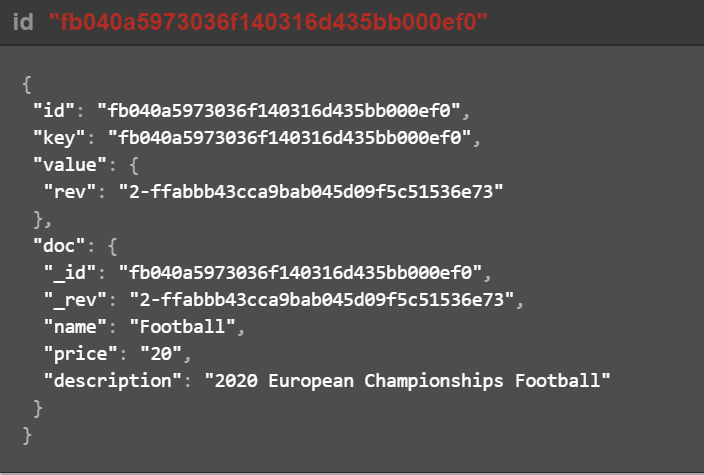
In the section, I will update the football products as it is now time for the International European football championships and the world cup is no longer the main competition:



I had to use the PUT command to be able to update the football product this also changed to revision number:

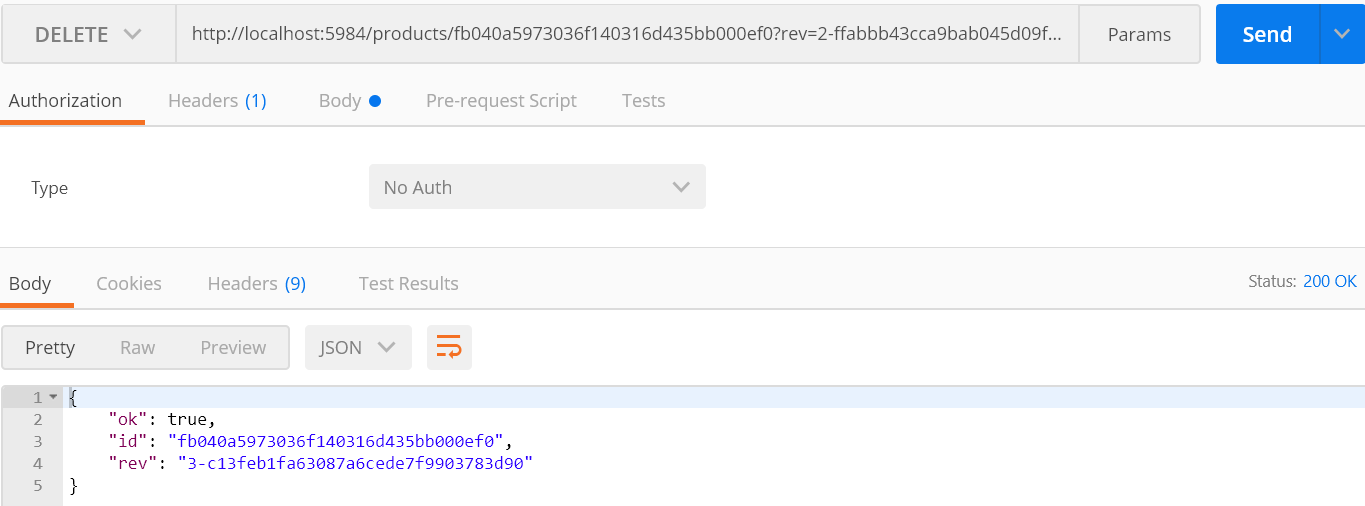


Database update below:

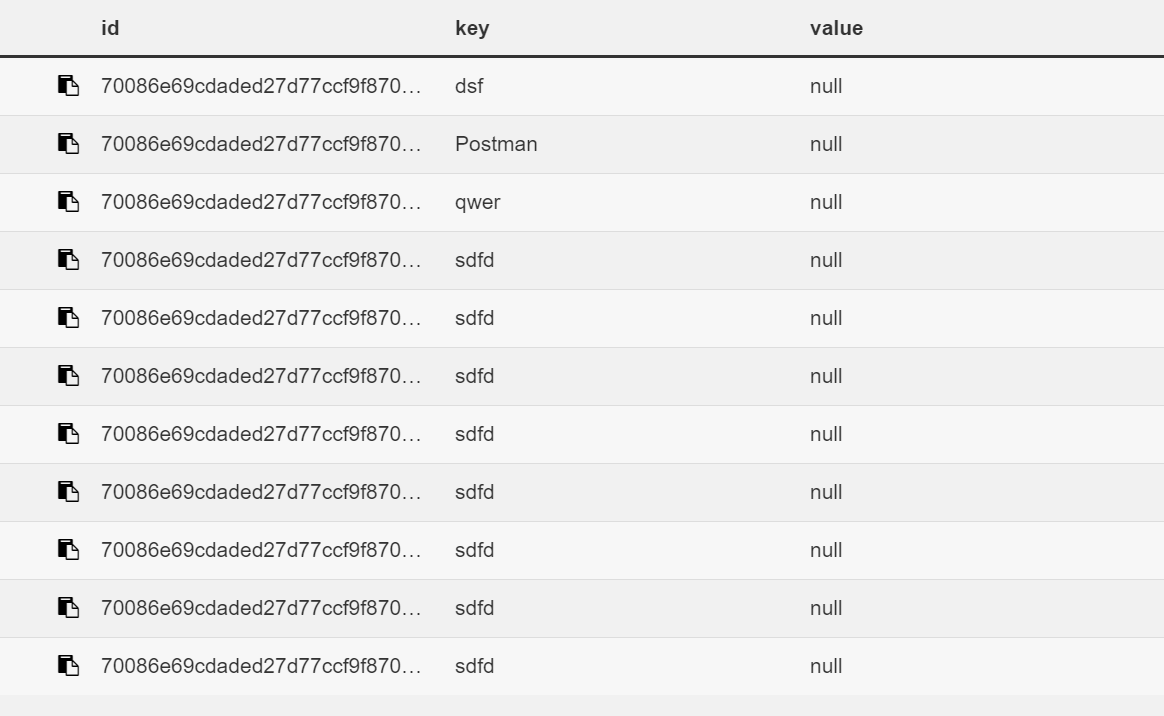


DELETE:

I will now remove the Football product as there are no championships on, so no special footballs are being sold currently:



The result above shows that the database has been removed successfully and is also no longer in the database the image below shows all of the products in the database and the football not is there:



Question 2

The driver I used was phpOnCouch it was easy to install and had plenty of documentation that was given through a link of the github phpOnCouch repository. This showed how to do CRUD operations as well as create and get views from the database. It also had a video tutorial on how to setup the driver on your local computer. Plus I have experience using php in pervious projects, so found it easier to use.

I tried to use the node-couch driver on npm but I found it difficult to setup after installing it on the command line. Also, I had never used node js before so there was a bigger learning curve then using php.

I also found a driver called myCouch which is for C# but I did not use this as I had been developing my program using php but this would have been an alternative if the phpOnCouch was unsuccessful.

CRUD using phpOnCouch Driver

Create

First I click on the ad product link in my navigation bar:



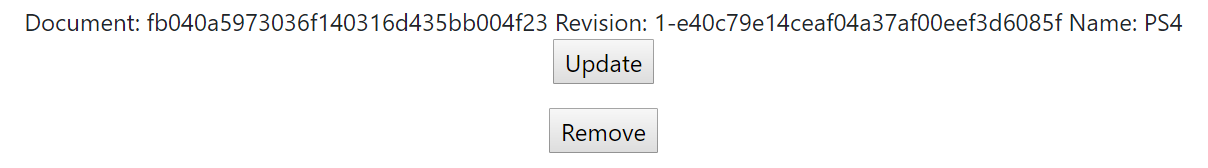


Then I enter into the fields provided:





When I click the submit button, It will being me bank to the home page and will then add the product to the database which the then list the product on the screen.



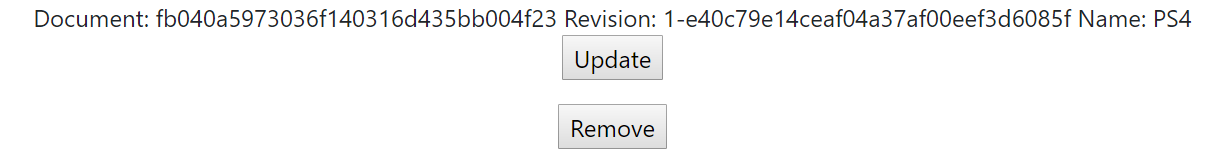
This is a screen shot of the product in the database below:



Read

This is the code to show the product in the database below:





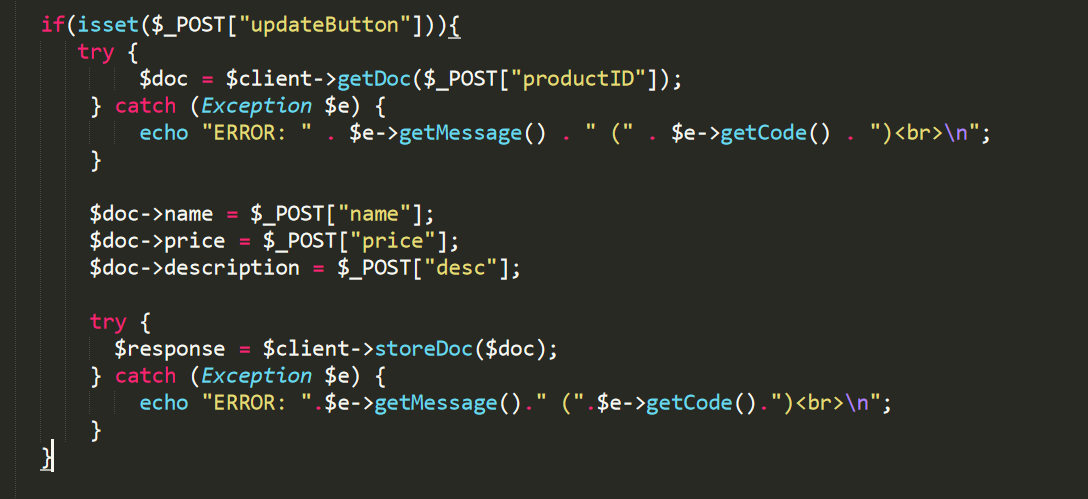
Update

This is the code that updates the product below:

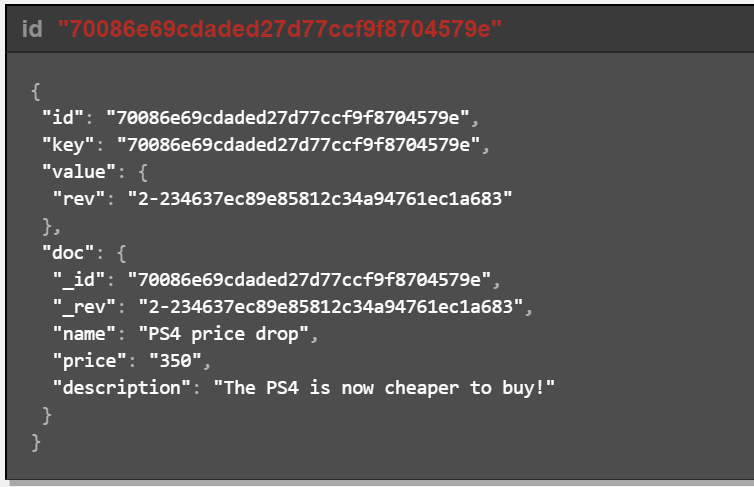
This is the code for the fields in the updata.php file below:

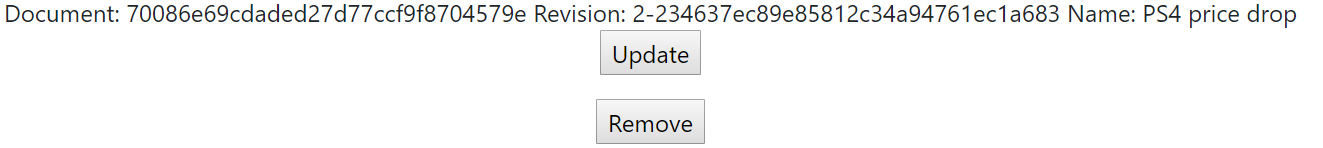


Below is when the text in the fields is passed to index.php and updates the product in the database:



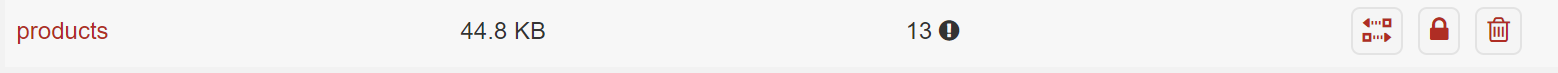
Here is the database when I update the product below:

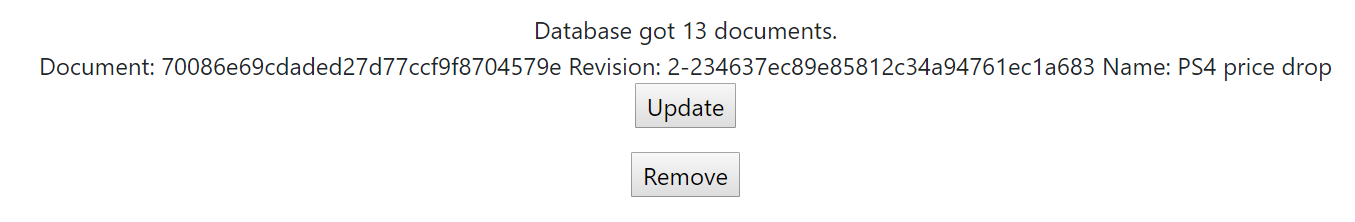




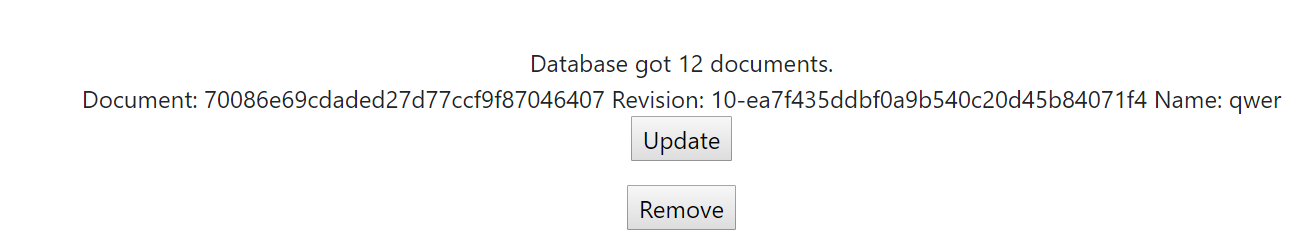
DELETE

So currently there are 13 products in the database:





I will use the remove button provided for each product and remove the PS4 product from the database as you can see there are now only 12 products in the database:



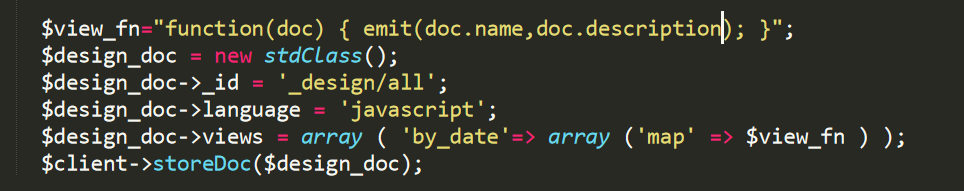


Below is a screen shot of the code to delete a product:

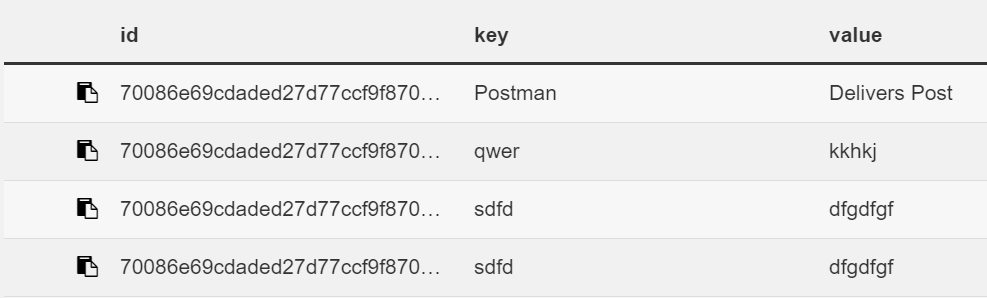


Map reduce

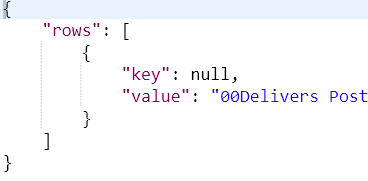
Creating map reduce code:



This emits the product name as the key and the product description as the value. Here is an example in my database of it working:



Here’s an example on the postman REST API:



Unfortunately, I could not get the key to work But this should output ‘Postman’.

Conclusion

It is a worth will software to use CouchDB as there are huge demands for developers with experience in the software. I do see why so much people using couchDb as it is easy to learn and get to grips with. It is a great software for storing large amounts of complex data that a relational database would be to slow to store the data. But noSQl databases can have lots of redundant data but that is a small con of noSql databases. I hope to learn more about this flexible software in the future and develop my skills.