

## NBA User Platform

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We've chosen to expand our project with text attribute, array attribute, and composite type. We changed the data type of the content column in the comment\_commented\_by table from varchar to text, and we implemented the other features through the addition of structures that would enable merchandise selling on our NBA user platform, because we thought NBA fans would be interested in purchasing items from the platform directly to support their favorite teams and the NBA league. We did this by creating a type named stock\_type to hold the color, size, and quantity for each product sold on the platform, and we created a type named merchandise\_t to store all the relevant information about the products such as id, name, price, description (of type text), and stock information (in the form of an array, the elements are of type stock\_type specifying the color, size, and quantity combinations available for the product). We then created a table named Merchandise of type merchandise\_t to input the product data. We found the creation of a stock\_type to be best for organizing stock information, as it allows us to easily match stock availability to the specific item. We also created two domains pos\_price and nonneg\_qty and used them in our composite types to ensure the prices are positive and quantities are nonnegative across our database. Finally, we created the Merchandise\_On\_Team\_Player table to match products to teams and players, so we can enable easy searching and hyperlinks on the platform website.

Queries:

1. Return the uid & content of comments that mention both Jayson Tatum and Klay Thompson

```
select uid, content
from comment_commented_by
where to_tsvector(content) @@ to_tsquery(' (tatum & thompson) | (jayson & klay) |
(jayson & thompson) | (tatum & klay) ');
```

```
proj1part2=> select uid, content
proj1part2-> from comment_commented_by
proj1part2-> where to_tsvector(content) @@ to_tsquery(' (tatum & thompson) | (jayson
& klay) | (jayson & thompson) | (tatum & klay) ');
```

2. Find how many merch products there are for Miami Heat (tid: 002) and return their mean price

```
Select count(*), avg(price::numeric)
From merchandise_on_team_player MT, merchandise M
Where MT.mid = M.mid and MT.tid = '002';
```

```
proj1part2=> Select count(*),avg(price::numeric)
From merchandise_on_team_player MT, merchandise M
Where MT.mid = M.mid and MT.tid = '002'
;
count |          avg
-----+-----
      2 | 35.9900000000000000
(1 row)
```

3. Find the total number of items in stock for Men's Los Angeles Lakers LeBron James Nike Gold 2020/21 Swingman Jersey - Icon Edition (mid: m0001)

```
select M.stock[1].quantity + M.stock[2].quantity + M.stock[3].quantity +
M.stock[4].quantity + M.stock[5].quantity + M.stock[6].quantity
from merchandise M
where M.mid = 'm0001';
```

```
proj1part2=> select M.stock[1].quantity + M.stock[2].quantity + M.stock[3].quantity + M.s
tock[4].quantity + M.stock[5].quantity + M.stock[6].quantity
from merchandise M
where M.mid = 'm0001';
?column?
-----
      650
(1 row)
```

(We've tried to do this query without summing up the elements by hand but couldn't get it to work)