App analysis

First let's look at our data:

- Calc date – date.
- Tier – user's ranking according to the user's Lifetime Value
- Platform – on which platform the user plays the app ('Web' = PC, 'iOS' = an Apple device, 'Android' = an Android device or 'Other').
- DAU – the number (count) of Daily Active Users.
- PUs – The number (count) of users that made a purchase.
- Revenue – The total net amount spent, in USD.

calc_date	tier_id	Platform	DAU	PUs	Revenue
21/05/2017	Royal Dian	Web	3,557	719	$6,075
29/05/2017	Royal Dian	Web	3,639	851	$6,987
10/05/2017	Black Dian	Android	111	27	$394
09/05/2017	Silver	Other	46,359	275	$617
09/05/2017	Platinum	iOS	49,708	6,244	$20,648
29/05/2017	Black Dian	Web	214	55	$872
13/05/2017	Royal Dian	Web	3,537	762	$5,936
18/05/2017	Bronze	Other	15,877	70	$155
23/05/2017	Black Dian	iOS	285	90	$1,141
09/05/2017	Royal Dian	Android	2,796	493	$3,147

Data date is for May 2017 only.

Data cleaning

I used pandas to clean up data and then export it to CSV file

```
In [1]: import pandas as pd
```

```
In [2]: df = pd.read_csv('app.csv')
```

```
In [3]: df
```

Out[3]:

	calc_date	tier_id	Platform	DAU	PUs	Revenue
0	21/5/2017	Royal Diamond	Web	3,557	719	$6,075
1	29/5/2017	Royal Diamond	Web	3,639	851	$6,987
2	10/5/2017	Black Diamond	Android	111	27	$394
3	9/5/2017	Silver	Other	46,359	275	$817
4	9/5/2017	Platinum	iOS	49,708	6,244	$20,648
...	...	...	...	...	...	...
863	26/5/2017	Gold	Other	16,383	475	$1,335
864	8/5/2017	Platinum	Other	6,309	884	$3,182
865	11/5/2017	Royal Diamond	Web	3,843	790	$5,969
866	31/5/2017	Platinum	iOS	50,307	5,927	$19,208
867	15/5/2017	Bronze	iOS	56,897	400	$822

868 rows × 6 columns

```
In [6]: list(df.keys())
```

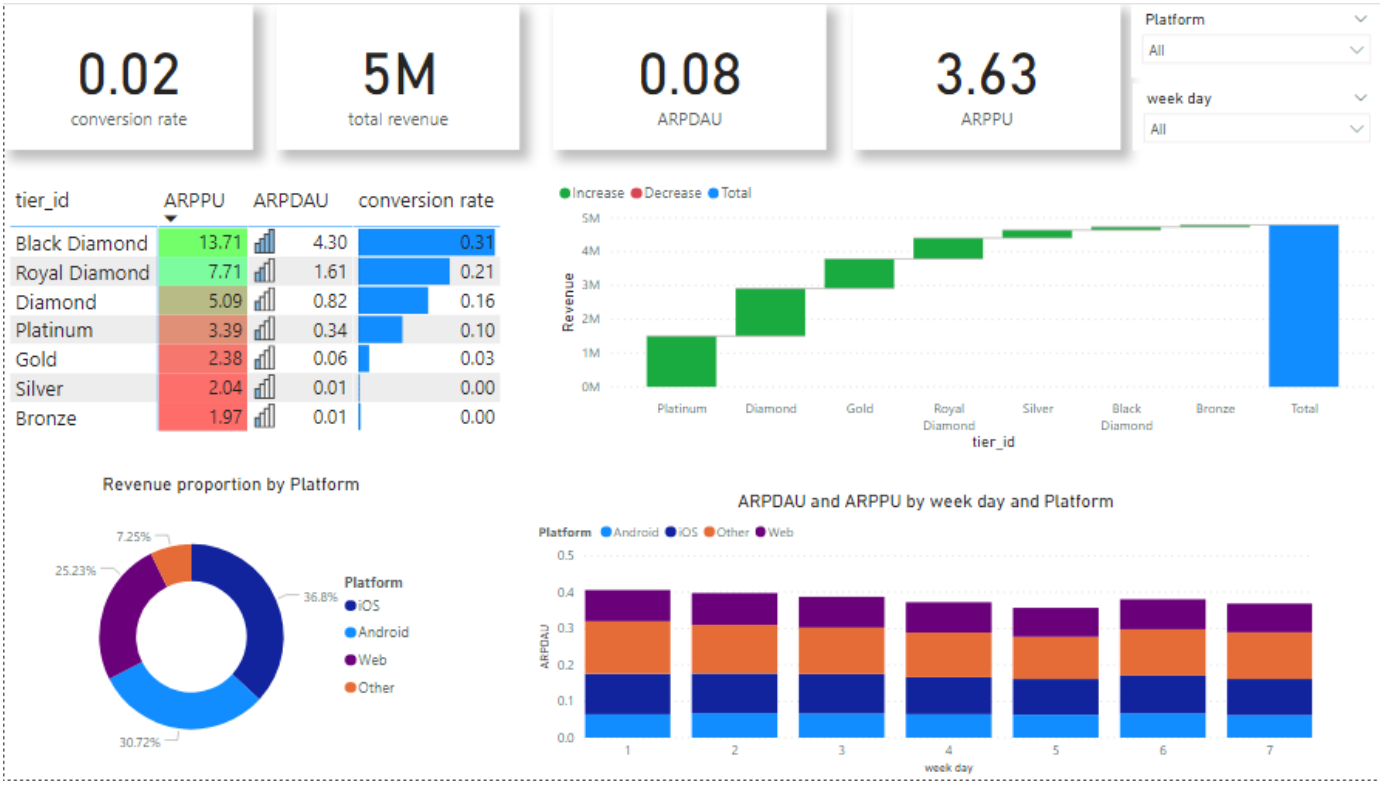
```
Out[6]: ['calc_date', 'tier_id', 'Platform', 'DAU', 'PUs', 'Revenue']
```

```
In [5]: df = df.rename(columns=lambda x: x.strip())
```

```
In [8]: df['DAU'] = df['DAU'].str.replace(',', '')
        df['PUs'] = df['PUs'].str.replace(',', '')
        df['Revenue'] = df['Revenue'].str.replace(',', '')
        df['Revenue'] = df['Revenue'].str.replace('$', '')
```

After exporting the data, I connect it to Power BI and create dashboard using DAX and power query.

Here is the dashboard I was created. I choose as KPI's conversion rate which I defined as as the proportion of paying user / daily active users , avarage revenue per daily active user(ARPDAU), avarae revenue per paying user(ARPPU) and revenue and explore it with different dimention given in data .



As we can see, there is a lot of insight that we can deduced from the graphs:

- The monthly revenue, monthly conversion rate, ARRPU and ARPDAU
- We can see that Black diamond and royal diamond users are on top regarding conversion rate, ARPPU and ARPDAU but most of the revenue do not come from those users, it's come from platinum and diamond users.
- Most of the revenues come from Android and iOS platforms, but the most valuable users come from other platforms.