Age_Wise

In [15]:
```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib as plt
```

In [16]:
```
xls = pd.ExcelFile(r"C:\Users\dell\Downloads\App Analytics Report-06.05.2023 (1).xlsx")
age_wise = pd.read_excel(xls, 'User By Age')
```

In [17]:
```
age_wise
```

Out[17]:

	Age	Users	New users	Engaged sessions	Engagement rate	Engaged sessions per user	Average engagement time	Event count	Conversions	Total revenue
0	unknown	14303	13636	24976	0.569098	1.746207	422.22330	817501	99310	0
1	18-24	4282	3678	7291	0.695308	1.702709	251.16300	309328	53661	0
2	25-34	2920	2161	3749	0.504780	1.283904	97.24144	90074	20172	0
3	65+	1422	1081	1640	0.539829	1.153305	52.30661	24780	4891	0
4	55-64	1403	979	1552	0.519411	1.106201	55.37063	25169	4823	0
5	35-44	1202	785	1420	0.510424	1.181364	96.08236	33016	8111	0
6	45-54	810	552	881	0.561862	1.087654	84.54321	18661	2946	0

In [18]:
```
age_wise.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7 entries, 0 to 6
Data columns (total 10 columns):
 #   Column                    Non-Null Count  Dtype  
---  ------                    --------------  -----  
 0   Age                       7 non-null      object 
 1   Users                     7 non-null      int64  
 2   New users                 7 non-null      int64  
 3   Engaged sessions          7 non-null      int64  
 4   Engagement rate           7 non-null      float64
 5   Engaged sessions per user 7 non-null      float64
 6   Average engagement time   7 non-null      float64
 7   Event count               7 non-null      int64  
 8   Conversions               7 non-null      int64  
 9   Total revenue             7 non-null      int64  
dtypes: float64(3), int64(6), object(1)
memory usage: 688.0+ bytes
```

In [19]:
```
age_wise["Age"].nunique()
```

Out[19]:
```
7
```

In [21]:
```
age_wise.describe().transpose()
```

Out[21]:

	count	mean	std	min	25%	50%	75%	
Users	7.0	3763.142857	4802.784277	810.000000	1302.500000	1422.000000	3601.000000	
New users	7.0	3267.428571	4698.464389	552.000000	882.000000	1081.000000	2919.500000	
Engaged sessions	7.0	5929.857143	8686.797289	881.000000	1486.000000	1640.000000	5520.000000	
Engagement rate	7.0	0.557245	0.065705	0.504780	0.514917	0.539829	0.565480	
Engaged sessions per user	7.0	1.323049	0.281679	1.087654	1.129753	1.181364	1.493307	
Average engagement time	7.0	151.275793	137.114289	52.306610	69.956920	96.082360	174.202220	
Event count	7.0	188361.285714	296206.859168	18661.000000	24974.500000	33016.000000	199701.000000	8
Conversions	7.0	27702.000000	36282.992857	2946.000000	4857.000000	8111.000000	36916.500000	
Total revenue	7.0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	

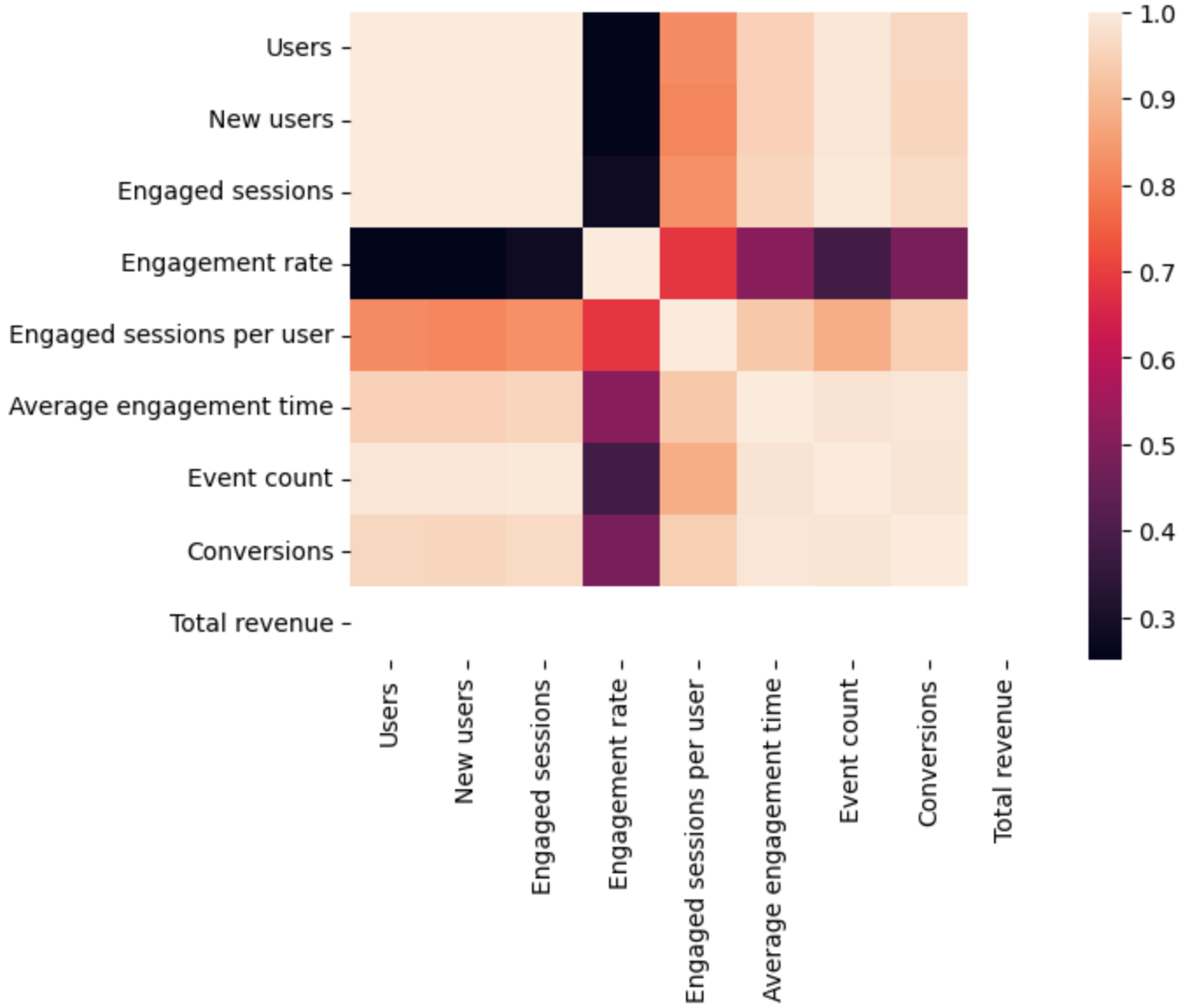
In [22]:
```
age_wise.corr()
```

Out[22]:

	Users	New users	Engaged sessions	Engagement rate	Engaged sessions per user	Average engagement time	Event count	Conversions	Tota revenu
Users	1.000000	0.999495	0.999200	0.252006	0.820154	0.948985	0.989234	0.961441	Nal
New users	0.999495	1.000000	0.999463	0.251575	0.811640	0.947963	0.989096	0.957671	Nal
Engaged sessions	0.999200	0.999463	1.000000	0.279241	0.828715	0.957750	0.993309	0.966090	Nal
Engagement rate	0.252006	0.251575	0.279241	1.000000	0.686148	0.508107	0.383889	0.481946	Nal
Engaged sessions per user	0.820154	0.811640	0.828715	0.686148	1.000000	0.931316	0.881144	0.944022	Nal
Average engagement time	0.948985	0.947963	0.957750	0.508107	0.931316	1.000000	0.983223	0.991205	Nal
Event count	0.989234	0.989096	0.993309	0.383889	0.881144	0.983223	1.000000	0.986938	Nal
Conversions	0.961441	0.957671	0.966090	0.481946	0.944022	0.991205	0.986938	1.000000	Nal
Total revenue	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	Nal

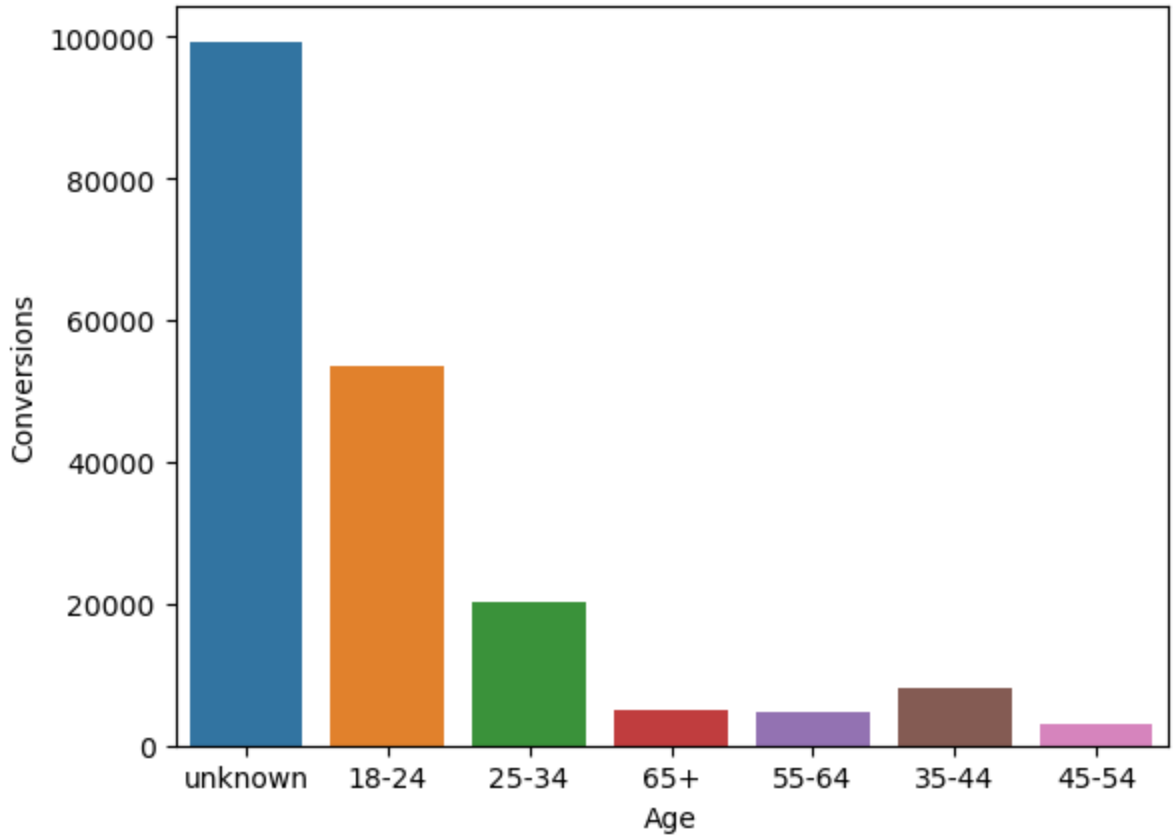
In [23]:
```
sns.heatmap(age_wise.corr())
```

Out[23]:
```
<AxesSubplot:>
```



In [25]:
```
sns.barplot(x = "Age" , y = "Conversions" , data = age_wise)
```

Out[25]:
```
<AxesSubplot:xlabel='Age', ylabel='Conversions'>
```



Observations

analysis and findings

1) No null values are present.

2) Only Engagement rate is less co-relative with the rate of conversion

3) Age group of 18-24 is highly invested in the website.