In [1]:

```
import pandas as pd
import numpy as np
```

In [2]:

```
df = pd.read_csv("C:/Users/ameya/OneDrive/Desktop/DSBDAL/nba.csv")
```

In [3]:

```
df.head()
```

Out[3]:

	Name	Team	Number	Position	Age	Height	Weight	College	Salary
0	Avery Bradley	Boston Celtics	0.0	PG	25.0	6-2	180.0	Texas	7730337.0
1	Jae Crowder	Boston Celtics	99.0	SF	25.0	6-6	235.0	Marquette	6796117.0
2	John Holland	Boston Celtics	30.0	SG	27.0	6-5	205.0	Boston University	NaN
3	R.J. Hunter	Boston Celtics	28.0	SG	22.0	6-5	185.0	Georgia State	1148640.0
4	Jonas Jerebko	Boston Celtics	8.0	PF	29.0	6-10	231.0	NaN	5000000.0

In [4]:

```
df.isnull().sum()
```

Out[4]:

```
Name         1
Team         1
Number       1
Position     1
Age          1
Height       1
Weight       1
College     85
Salary      12
dtype: int64
```

In [5]:

```
df.dropna(inplace=True)
```

In [7]:

```
df.isnull().sum()
```

Out[7]:

```
Name        0
Team        0
Number      0
Position    0
Age         0
Height      0
Weight      0
College     0
Salary      0
dtype: int64
```

In [8]:

```
df['Height'].value_counts()
```

Out[8]:

```
6-9     49
6-7     37
6-8     36
6-6     36
6-10    32
6-11    29
6-5     29
6-4     28
6-3     25
7-0     20
6-2     13
6-1     12
6-0     10
5-11     3
7-1      3
5-9      1
7-2      1
Name: Height, dtype: int64
```

In [9]:

```
height_grp = df.groupby(df['Height'])
```

In [11]:

```
height_grp.get_group('6-0')
```

Out[11]:

	Name	Team	Number	Position	Age	Height	Weight	College	Salary
47	Isaiah Canaan	Philadelphia 76ers	0.0	PG	25.0	6-0	201.0	Murray State	947276.0
57	Ish Smith	Philadelphia 76ers	1.0	PG	27.0	6-0	175.0	Wake Forest	947276.0
67	Kyle Lowry	Toronto Raptors	7.0	PG	30.0	6-0	205.0	Villanova	12000000.0
100	Chris Paul	Los Angeles Clippers	3.0	PG	31.0	6-0	175.0	Wake Forest	21468695.0
142	Darren Collison	Sacramento Kings	7.0	PG	28.0	6-0	175.0	UCLA	5013559.0
152	Aaron Brooks	Chicago Bulls	0.0	PG	31.0	6-0	161.0	Oregon	2250000.0
228	J.J. Barea	Dallas Mavericks	5.0	PG	31.0	6-0	185.0	Northeastern	4290000.0
305	Patty Mills	San Antonio Spurs	8.0	PG	27.0	6-0	185.0	Saint Mary's	3578947.0
384	D.J. Augustin	Denver Nuggets	12.0	PG	28.0	6-0	183.0	Texas	3000000.0
394	Jameer Nelson	Denver Nuggets	1.0	PG	34.0	6-0	190.0	Saint Joseph's	4345000.0

In [12]:

```
df['Age'].value_counts()
```

Out[12]:

```
25.0    41
24.0    41
27.0    35
23.0    33
26.0    32
28.0    27
22.0    23
30.0    20
29.0    17
31.0    17
20.0    15
21.0    14
36.0     9
32.0     9
33.0     8
35.0     7
34.0     7
38.0     3
19.0     2
40.0     2
37.0     1
39.0     1
Name: Age, dtype: int64
```

In [14]:

```
Age_grp = df.groupby(df['Age'])
```

In [16]:

```
Age_grp.get_group(36)
```

Out[16]:

	Name	Team	Number	Position	Age	Height	Weight	College	Salary
93	Jamal Crawford	Los Angeles Clippers	11.0	SG	36.0	6-5	195.0	Michigan	5675000.0
119	Metta World Peace	Los Angeles Lakers	37.0	SF	36.0	6-7	260.0	St. John's	947276.0
139	Caron Butler	Sacramento Kings	31.0	SF	36.0	6-7	228.0	Connecticut	1449187.0
183	Steve Blake	Detroit Pistons	22.0	PG	36.0	6-3	172.0	Maryland	2170465.0
260	Matt Barnes	Memphis Grizzlies	22.0	SF	36.0	6-7	226.0	UCLA	3542500.0
296	Matt Bonner	San Antonio Spurs	15.0	C	36.0	6-10	235.0	Florida	947276.0
343	Udonis Haslem	Miami Heat	40.0	PF	36.0	6-8	235.0	Florida	2854940.0
392	Mike Miller	Denver Nuggets	3.0	SG	36.0	6-8	218.0	Florida	947276.0
406	Tayshaun Prince	Minnesota Timberwolves	12.0	SF	36.0	6-9	212.0	Kentucky	947276.0

In [20]:

```
Age_grp['Salary'].max()
```

Out[20]:

```
Age
19.0     2127840.0
20.0     5703600.0
21.0     5758680.0
22.0     6331404.0
23.0    16000000.0
24.0    16407501.0
25.0    15851950.0
26.0    17120106.0
27.0    20158622.0
28.0    19689000.0
29.0    16407500.0
30.0    19689000.0
31.0    21468695.0
32.0    22875000.0
33.0     8193029.0
34.0    20000000.0
35.0     5746479.0
36.0     5675000.0
37.0     5000000.0
38.0     3376000.0
39.0     4088019.0
40.0     5250000.0
Name: Salary, dtype: float64
```

In [21]:

```
Age_grp['Salary'].min()
```

Out[21]:

```
Age
19.0    1733040.0
20.0     525093.0
21.0     525093.0
22.0     525093.0
23.0      83397.0
24.0     525093.0
25.0      55722.0
26.0     134215.0
27.0      55722.0
28.0     206192.0
29.0     111444.0
30.0     947276.0
31.0     947276.0
32.0     295327.0
33.0     200600.0
34.0     261894.0
35.0     947276.0
36.0     947276.0
37.0    5000000.0
38.0     222888.0
39.0    4088019.0
40.0     250750.0
Name: Salary, dtype: float64
```

In [22]:

```
Age_grp['Salary'].count()
```

Out[22]:

```
Age
19.0     2
20.0    15
21.0    14
22.0    23
23.0    33
24.0    41
25.0    41
26.0    32
27.0    35
28.0    27
29.0    17
30.0    20
31.0    17
32.0     9
33.0     8
34.0     7
35.0     7
36.0     9
37.0     1
38.0     3
39.0     1
40.0     2
Name: Salary, dtype: int64
```

In [23]:

```
Age_grp['Salary'].std()
```

Out[23]:

```
Age
19.0    2.791658e+05
20.0    1.609006e+06
21.0    1.542987e+06
22.0    1.582921e+06
23.0    2.930108e+06
24.0    4.982172e+06
25.0    4.498505e+06
26.0    6.322481e+06
27.0    7.007965e+06
28.0    4.507389e+06
29.0    5.586068e+06
30.0    4.733617e+06
31.0    6.261255e+06
32.0    8.500014e+06
33.0    2.408262e+06
34.0    6.444587e+06
35.0    1.869718e+06
36.0    1.625479e+06
37.0             NaN
38.0    1.651542e+06
39.0             NaN
40.0    3.535004e+06
Name: Salary, dtype: float64
```

In [28]:

```
Age_grp['Salary'].median()
```

Out[28]:

```
Age
19.0    1930440.0
20.0    2357760.0
21.0    1494540.0
22.0    2041080.0
23.0    1155600.0
24.0    1509360.0
25.0    1159680.0
26.0    3183487.5
27.0    3425510.0
28.0    4500000.0
29.0    6500000.0
30.0    6337500.0
31.0    5219169.0
32.0    6300000.0
33.0    2300000.0
34.0    5016000.0
35.0    2854940.0
36.0    1449187.0
37.0    5000000.0
38.0     947276.0
39.0    4088019.0
40.0    2750375.0
Name: Salary, dtype: float64
```

In [24]:

```
Age_grp['Salary'].mean()
```

Out[24]:

```
Age
19.0    1.930440e+06
20.0    2.616956e+06
21.0    2.113412e+06
22.0    2.465265e+06
23.0    2.141789e+06
24.0    3.952886e+06
25.0    3.717713e+06
26.0    6.902746e+06
27.0    6.642361e+06
28.0    5.293187e+06
29.0    6.583558e+06
30.0    6.415726e+06
31.0    7.081688e+06
32.0    8.772865e+06
33.0    3.096028e+06
34.0    6.817141e+06
35.0    2.892165e+06
36.0    2.164577e+06
37.0    5.000000e+06
38.0    1.515388e+06
39.0    4.088019e+06
40.0    2.750375e+06
Name: Salary, dtype: float64
```

In [27]:

```
Age_grp['Salary'].describe()
```

Out[27]:

	count	mean	std	min	25%	50%	75%	
Age								
19.0	2.0	1.930440e+06	2.791658e+05	1733040.0	1831740.00	1930440.0	2029140.00	2
20.0	15.0	2.616956e+06	1.609006e+06	525093.0	1515960.00	2357760.0	3506820.00	5
21.0	14.0	2.113412e+06	1.542987e+06	525093.0	1212090.00	1494540.0	2116650.00	5
22.0	23.0	2.465265e+06	1.582921e+06	525093.0	1145760.00	2041080.0	3414660.00	6
23.0	33.0	2.141789e+06	2.930108e+06	83397.0	650000.00	1155600.0	2891760.00	16
24.0	41.0	3.952886e+06	4.982172e+06	525093.0	845059.00	1509360.0	3873398.00	16
25.0	41.0	3.717713e+06	4.498505e+06	55722.0	947276.00	1159680.0	4236287.00	15
26.0	32.0	6.902746e+06	6.322481e+06	134215.0	1070788.50	3183487.5	13603261.00	17
27.0	35.0	6.642361e+06	7.007965e+06	55722.0	1015421.00	3425510.0	9617977.50	20
28.0	27.0	5.293187e+06	4.507389e+06	206192.0	1568421.00	4500000.0	7135000.00	19
29.0	17.0	6.583558e+06	5.586068e+06	111444.0	1320000.00	6500000.0	10449438.00	16
30.0	20.0	6.415726e+06	4.733617e+06	947276.0	2683821.25	6337500.0	8297031.25	19
31.0	17.0	7.081688e+06	6.261255e+06	947276.0	3000000.00	5219169.0	10151612.00	21
32.0	9.0	8.772865e+06	8.500014e+06	295327.0	3135000.00	6300000.0	11710456.00	22
33.0	8.0	3.096028e+06	2.408262e+06	200600.0	1973122.25	2300000.0	4013361.50	8
34.0	7.0	6.817141e+06	6.444587e+06	261894.0	3822500.00	5016000.0	7398547.00	20
35.0	7.0	2.892165e+06	1.869718e+06	947276.0	1223231.50	2854940.0	4125000.00	5
36.0	9.0	2.164577e+06	1.625479e+06	947276.0	947276.00	1449187.0	2854940.00	5
37.0	1.0	5.000000e+06	NaN	5000000.0	5000000.00	5000000.0	5000000.00	5
38.0	3.0	1.515388e+06	1.651542e+06	222888.0	585082.00	947276.0	2161638.00	3
39.0	1.0	4.088019e+06	NaN	4088019.0	4088019.00	4088019.0	4088019.00	4
40.0	2.0	2.750375e+06	3.535004e+06	250750.0	1500562.50	2750375.0	4000187.50	5

In [ ]: