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C:\Users\ASUS\PycharmProjects\Entri\dhanyaProjects\.venv\Scripts\python.exe "C:\Users\ASUS\PycharmProjects\Entri\dhanyaProjects\Module_End Project.py"
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 458 entries, 0 to 457
Data columns (total 10 columns):
 #   Column    Non-Null Count  Dtype
---  ------    --------------  -----
 0   Name      458 non-null    object
 1   Team      458 non-null    object
 2   Number    458 non-null    int64
 3   Position  458 non-null    object
 4   Age       458 non-null    int64
 5   Height    458 non-null    object
 6   Weight    458 non-null    int64
 7   College   374 non-null    object
 8   Salary    447 non-null    float64
 9   height    458 non-null    int32
dtypes: float64(1), int32(1), int64(3), object(5)
memory usage: 34.1+ KB
             Name            Team  Number  ...             College     Salary height
0  Avery Bradley  Boston Celtics       0  ...               Texas  7730337.0    166
1    Jae Crowder  Boston Celtics      99  ...           Marquette  6796117.0    176
2   John Holland  Boston Celtics      30  ...  Boston University        NaN    157
3    R.J. Hunter  Boston Celtics      28  ...   Georgia State  1148640.0    171
4  Jonas Jerebko  Boston Celtics       8  ...                 NaN  5000000.0    175

[5 rows x 10 columns]
Team Distribution:
 Team
New Orleans Pelicans      19
Memphis Grizzlies         18
Utah Jazz                 16
Milwaukee Bucks           16
```

```
33 New York Knicks            16
34 Boston Celtics             15
35 Los Angeles Clippers       15
36 Los Angeles Lakers         15
37 Phoenix Suns               15
38 Sacramento Kings           15
39 Brooklyn Nets              15
40 Philadelphia 76ers         15
41 Toronto Raptors            15
42 Golden State Warriors      15
43 Indiana Pacers             15
44 Detroit Pistons            15
45 Cleveland Cavaliers        15
46 Chicago Bulls              15
47 Houston Rockets            15
48 San Antonio Spurs          15
49 Atlanta Hawks              15
50 Dallas Mavericks           15
51 Charlotte Hornets          15
52 Miami Heat                 15
53 Denver Nuggets             15
54 Washington Wizards         15
55 Portland Trail Blazers     15
56 Oklahoma City Thunder      15
57 Orlando Magic              14
58 Minnesota Timberwolves     14
59 Name: count, dtype: int64
60
61 Team Percentage:
62  Team
63 New Orleans Pelicans       4.148472
64 Memphis Grizzlies          3.930131
65 Utah Jazz                  3.493450
66 Milwaukee Bucks            3.493450
67 New York Knicks            3.493450
68 Boston Celtics             3.275109
69 Los Angeles Clippers       3.275109
70 Los Angeles Lakers         3.275109
71 Phoenix Suns               3.275109
72 Sacramento Kings           3.275109
73 Brooklyn Nets              3.275109
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 74 Philadelphia 76ers        3.275109
 75 Toronto Raptors           3.275109
 76 Golden State Warriors     3.275109
 77 Indiana Pacers            3.275109
 78 Detroit Pistons           3.275109
 79 Cleveland Cavaliers       3.275109
 80 Chicago Bulls             3.275109
 81 Houston Rockets           3.275109
 82 San Antonio Spurs         3.275109
 83 Atlanta Hawks             3.275109
 84 Dallas Mavericks          3.275109
 85 Charlotte Hornets         3.275109
 86 Miami Heat                3.275109
 87 Denver Nuggets            3.275109
 88 Washington Wizards        3.275109
 89 Portland Trail Blazers    3.275109
 90 Oklahoma City Thunder     3.275109
 91 Orlando Magic             3.056769
 92 Minnesota Timberwolves    3.056769
 93 Name: count, dtype: float64
 94 Position Distribution:
 95  Position
 96 SG    102
 97 PF    100
 98 PG     92
 99 SF     85
100 C      79
101 Name: count, dtype: int64
102 Age Group Distribution:
103  age_group
104 20-29    346
105 30-39     91
106 40-49      0
107 50-59      0
108 Name: count, dtype: int64
109 Highest Salary Expenditure by Team: Cleveland
    Cavaliers
110 Highest Salary Expenditure by Position: C
111 Correlation between Age and Salary: 0.
    21400941226570955
112
```

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1. Team Distribution Insights:
The team distribution shows that the New Orleans Pelicans and Memphis Grizzlies have the highest representation in this dataset with 4.1% and 3.9% of employees, respectively.
Overall, most teams have an even distribution of around 3.3% of the workforce each.

2. Position Distribution Insights:
The most common positions are Shooting Guard (SG) and Power Forward (PF), which together make up a significant portion of the workforce.
Center (C) is the least represented position, which may indicate a higher demand for guards and forwards or their higher retention in teams.

3. Age Group Distribution Insights:
Most employees (346) are in the 20-29 age group, followed by 91 in the 30-39 range.
This reflects a younger workforce typical for high-performance roles like professional athletes, as no employees are aged 40 or older.

4. Salary Expenditure Insights:
The team with the highest salary expenditure is the Cleveland Cavaliers, suggesting they may prioritize investing in high-value players.
Among positions, Centers (C) have the highest total salary expenditure, likely due to the demand for this specific skill set.

5. Correlation between Age and Salary Insight:
The correlation between age and salary is 0.21, which shows a weak positive relationship.
This indicates that salary tends to increase slightly with age, but age alone is not a strong predictor of salary. Performance, experience, and position likely play a larger role.

Process finished with exit code 0

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