**Python Module End Assignment**

**Assignemnt link:** [**https://github.com/hari9585-cell/Python**](https://github.com/hari9585-cell/Python)

The data was downloaded from below link:  
  
<https://docs.google.com/spreadsheets/d/1VP9BE_eI2yl6uUHSm4mGiiwjRdoqCqnkcIjsv5Q2ex4/edit?usp=share_link>

# **Project Summary and Findings**

## **1. Data Preprocessing**

* The "height" column was replaced with random values between 150 and 180 to maintain data integrity.
* Missing values (if any) were handled appropriately to ensure a clean dataset**.**

## **2. Analysis and Key Findings**

### 2.1 Employee Distribution Across Teams

* The team with the highest number of employees is New Orleans Team, making up 4.148 % of the workforce.
* The team with the least employees is Orlando Magic and Minnesota Timberwolves., contributing only 3.056 % to the total.

### **2.2 Employee Segregation by Position**

* The most common job position is SG position.
* The least common position is C Position.

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### **2.3 Predominant Age Group**

* The majority of employees fall in the age category 20 to 30 Age category.
* Very few employees are in the 50 to 60 age category indicating less workforce.

### **2.4 Highest Salary Expenditure by Team & Position**

* Team named Cleveland cavaliers has the highest total salary expenditure, suggesting a higher number of senior roles or specialized skills in this team.
* Position Named C is the most expensive role in terms of salary distribution.

**2.5 Finding for Correlation Between Age and Salary (0.21)**

* A correlation coefficient of **0.21** suggests a **weak positive correlation** between age and salary. This means that as age increases, salary also tends to increase, but the relationship is not very strong.

## **3. Visual Insights from Graphs**

* **Bar charts** effectively show team distribution and salary expenses.
* **Pie charts** helped in visualizing employee percentage across positions.
* **Scatter plots** indicated the relationship between age and salary.
* **Histograms** provided insights into the age distribution of employees.