Assignment

Employee Dataset -

The given dataset comprises employee details like name, age, salary and designation. Based on the mentioned dataset, answer the following questions.

In [1]:
```
import numpy as np
import matplotlib.pyplot as plt

employee_name = np.array(["Claire", "Darrin", "Sean", "Brosina", "Andrew", "Irene", "Harold", "Pete", "A
salary = np.array([88962,  67659, 117501, 149957,  32212,  63391,  14438,  22445, 72287, 195588,  17240,
designation = np.array(['Manager', 'Team Lead', 'Manager', 'Senior Manager', 'Team Lead', 'Team Lead', '
age = np.array([35, 26, 36, 44, 33, 33, 23, 22, 35, 53, 25, 41, 24, 31, 34, 43, 22, 29, 35, 25, 47, 22,
```

Q. What is the size of the employee dataset?

In [2]:
```
print("Size of employee dataset", employee_name.size)
```

```
Size of employee dataset 30
```

Q. How old is Tracy ?

In [13]:
```
print("Age of Tracy", int(age[employee_name=="Tracy"]))
```

```
Age of Tracy 34
```

What is Andrew 's designation?

In [15]:
```
print("Andrew's designation",designation[employee_name=="Andrew"])
```

```
Andrew's designation ['Team Lead']
```

Q. Name the employee with the highest salary.

In [20]:
```
print(employee_name[salary == np.max(salary)])
```

```
['Zuschuss']
```

Q. What is the designation and age of the employee with the highest salary?

In [32]:
```
print(list(zip(designation,age))[np.argmax(salary)])
```

```
('Managing Director', 53)
```

Q. How many managers are in there in the dataset?

In [50]:
```
print("Total Manager Count:", designation[designation=="Manager"].size)
```

```
Total Manager Count: 5
```

Q. What is the salary bracket for a Developer?

In [55]:
```
#get salary of Developer
dev_sal = salary[designation=="Developer"]
print("Salary Bracket of Developer from $",np.min(dev_sal) , "to $", np.max(dev_sal))

#cond=np.logical_and(arr>20, arr<30)
```

```
Salary Bracket of Developer from $ 13058 to $ 23259
```

Q. What is the average salary of a Team Lead?

In [59]:
```
print("Average Salary of Team Lead:$",round(np.mean(salary[designation=="Team Lead"]),2))
```

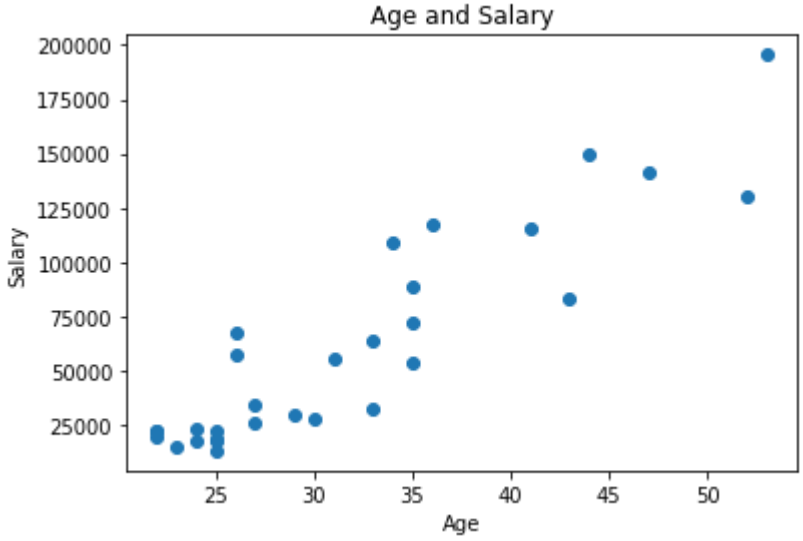
```
Average Salary of Team Lead:$ 47245.82
```

Q. Plot a scatter plot showing salary and age relation. Does salary increase with age as per the visual?

In [80]:
```
import matplotlib.pyplot as plt

plt.xlabel("Age")
plt.ylabel("Salary")
plt.title("Age and Salary")
plt.scatter(age,salary)  #this is to show trend (both x and y are numeric points)
plt.show()

#Yes salary increases over age
```



Q. Plot a bar chart showing the average age per designation.

In [5]:

```
arr_des = np.unique(designation)
arr_sal = np.array(list(map(lambda post: np.mean(salary[designation==post]),  arr_des)))
sort_order=arr_sal.argsort()[::-1]
fig = plt.figure(figsize=(20,10))  #row,column height
plt.bar(arr_des[sort_order],arr_sal[sort_order], color="cyan", edgecolor="black") #bar chart
plt.xlabel("Designation")
plt.ylabel("Average Salary")
plt.title("Average Designation Salary")
plt.show()
```