Libraries

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

In [5]:
```
employees = pd.read_excel('./Data/Data.xlsx')
```

In [6]:
```
employees.head()
```

Out[6]:

	ID	Imię	Nazwisko	Stanowisko	Zarobki	Typ Stanowiska
0	1	Anna	Kowalska	Kierownik	7500	Zarządzanie
1	2	Piotr	Nowak	Programista	6200	Techniczne
2	3	Marta	Wiśniewska	Analityk	5600	Analityczne
3	4	Andrzej	Kaczmarek	Grafik	4900	Kreatywne
4	5	Katarzyna	Zielińska	Specjalista ds. HR	5500	Administracyjne

In [7]:
```
employees.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 60 entries, 0 to 59
Data columns (total 6 columns):
 #   Column          Non-Null Count  Dtype 
---  ------          --------------  ----- 
 0   ID              60 non-null     int64 
 1   Imię            60 non-null     object
 2   Nazwisko        60 non-null     object
 3   Stanowisko      60 non-null     object
 4   Zarobki         60 non-null     int64 
 5   Typ Stanowiska  60 non-null     object
dtypes: int64(2), object(4)
memory usage: 2.9+ KB
```

Calculating average earnings by department

In [8]:
```
avg_earnings_by_department = employees.groupby('Typ Stanowiska')['Zarobki'].mean
```

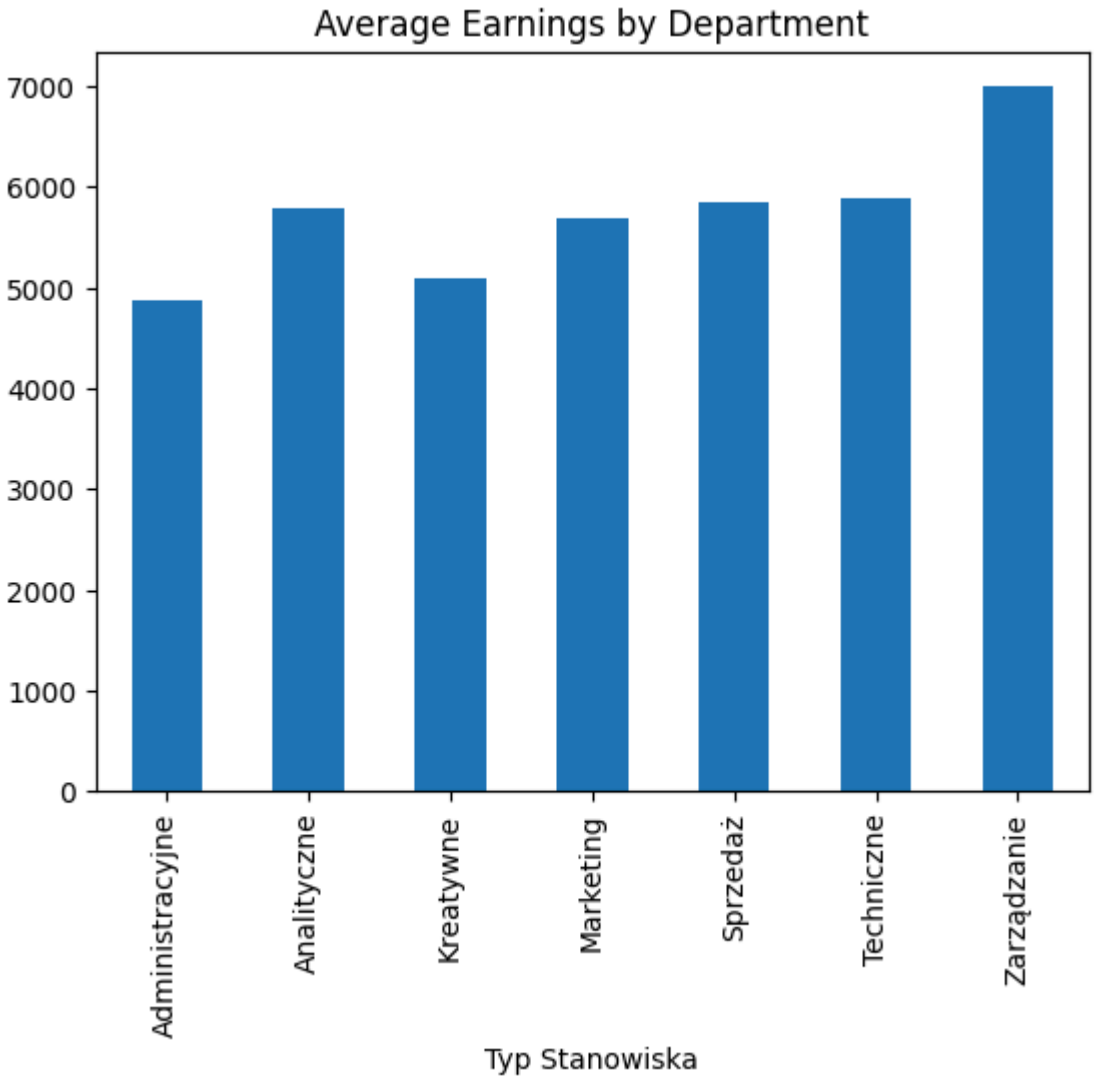
In [9]:
```
avg_earnings_by_department
```

Out[9]:
```
Typ Stanowiska
Administracyjne    4870.000000
Analityczne        5783.333333
Kreatywne          5100.000000
Marketing          5700.000000
Sprzedaż           5850.000000
Techniczne         5890.000000
Zarządzanie        6992.307692
Name: Zarobki, dtype: float64
```

Plotting the results

In [12]:
```
plt.title("Average Earnings by Department")
avg_earnings_by_department.plot(kind = 'bar', x='Typ Stanowiska', y='Zarobki')
```

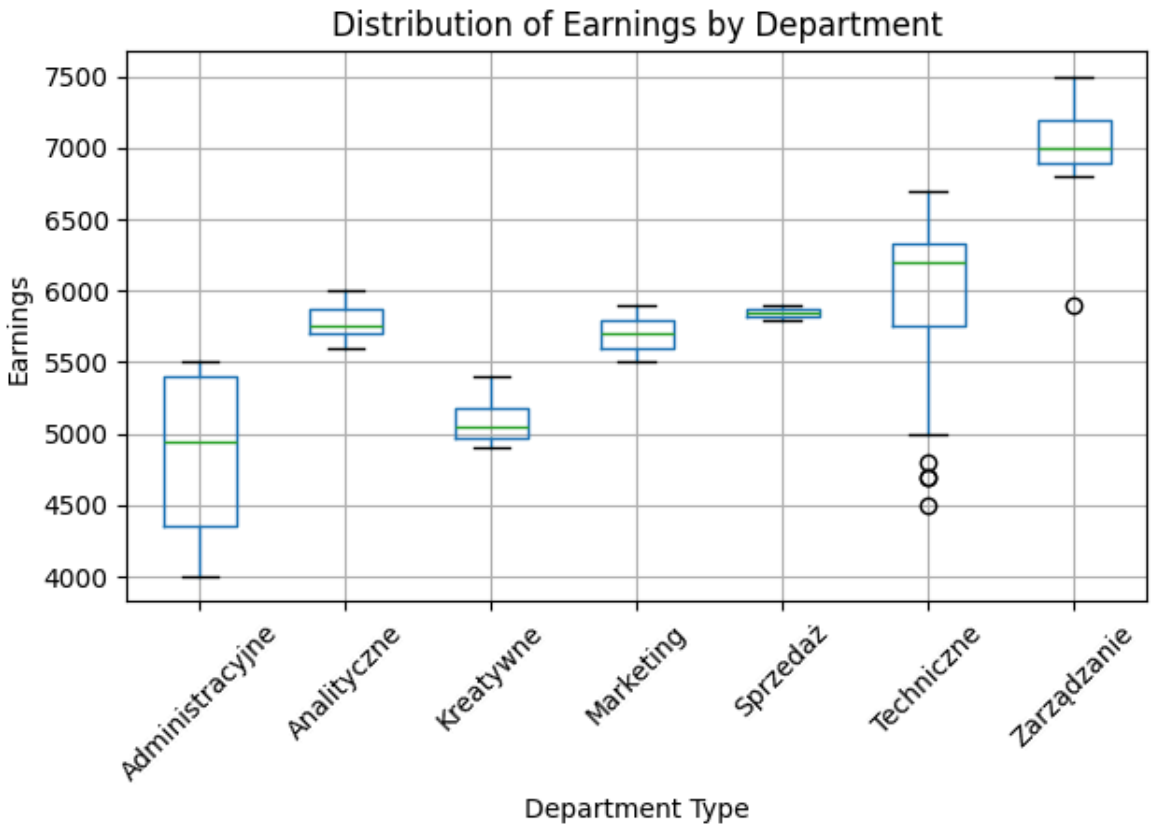
Out[12]:
```
<Axes: title={'center': 'Average Earnings by Department'}, xlabel='Typ Stanowis
ka'>
```



In [13]:
```
stats_by_department = employees.groupby('Typ Stanowiska')['Zarobki'].agg(['mean'
```

In [17]:
```
plt.figure(figsize=(12, 8))
employees.boxplot(column='Zarobki', by='Typ Stanowiska', rot=45)
plt.title("Distribution of Earnings by Department")
plt.suptitle('')
plt.xlabel('Department Type')
plt.ylabel('Earnings')
plt.tight_layout()
```

```
<Figure size 1200x800 with 0 Axes>
```



In [19]:
```
avg_earnings_by_department.to_excel('departmentStats.xlsx')
stats_by_department.to_excel('departmentStats.xlsx')
```