

# Assignment 4

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Problem Statement:

1. Which was the best month for sales? How much was earned that month?
2. Which product sold the most? Why do you think it did?
3. Which city sold the most products?
4. What Products are most often sold together?

**Code: 1)** Which was the best month for sales? How much was earned that month?

```
In [13]: month_sales = df.groupby('Months')['Sales'].sum()
         best_month = month_sales.idxmax()
         earning = month_sales.max()

         print("Best month for sales:", best_month)
         print("Earnings in that month:", earning)

         Best month for sales: JULY
         Earnings in that month: 16000000
```

**2)** Which product sold the most? Why do you think it did?

```
[14]: product_sales = df.groupby('GrainName')['Sales'].sum()
      most_sold_product = product_sales.idxmax()

      print("Product sold the most:", most_sold_product)

      Product sold the most: Wheat
```

**3)** Which city sold the most products?

```
In [15]: city_sales = df.groupby('City')['Sales'].sum()
most_sales_city = city_sales.idxmax()

print("City that sold the most products:", most_sales_city)

City that sold the most products: Asansole
```

## 5. 4) What Products are most often sold together?

```
In [16]: product_combinations = df.groupby(['GrainName', 'State'])['Sales'].count()
most_sold_together = product_combinations.idxmax()

print("Products most often sold together:", most_sold_together)

Products most often sold together: ('Ragi', 'Maharashtra')
```

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