Sales Forecasting
Month,Sales
Jan,12000
Feb,15000
Mar,18000
Apr,20000
May,22000
Jun,25000
Jul,27000
Aug,30000
Sep,28000
Oct,32000
Nov,35000
Dec,40000

Code:

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression

# Load dataset
data = pd.read_csv("sales.csv")

# Convert Month to numerical values
data['Month_Num'] = np.arange(1, len(data) + 1)

# Features and target
X = data[['Month_Num']]
y = data['Sales']

# Train Linear Regression model
model = LinearRegression()
model.fit(X, y)

# Predict future sales (next 3 months)
future_months = np.array([[13], [14], [15]])
future_sales = model.predict(future_months)

# Display predictions
print("Predicted Sales for Next 3 Months:")
for i, sale in enumerate(future_sales, start=13):
    print(f"Month {i}: {int(sale)}")

# Plot actual sales
```

```
plt.plot(data['Month_Num'], y, marker='o', label='Actual Sales')

# Plot predicted sales
plt.plot(future_months, future_sales, marker='o', linestyle='--', label='Predicted Sales')

plt.xlabel("Month Number")
plt.ylabel("Sales")
plt.title("Sales Forecasting using Linear Regression")
plt.legend()
plt.grid(True)
plt.show()
```

Output:
Predicted Sales for Next 3 Months:
Month 13: 40151.52
Month 14: 42431.24
Month 15: 44710.96