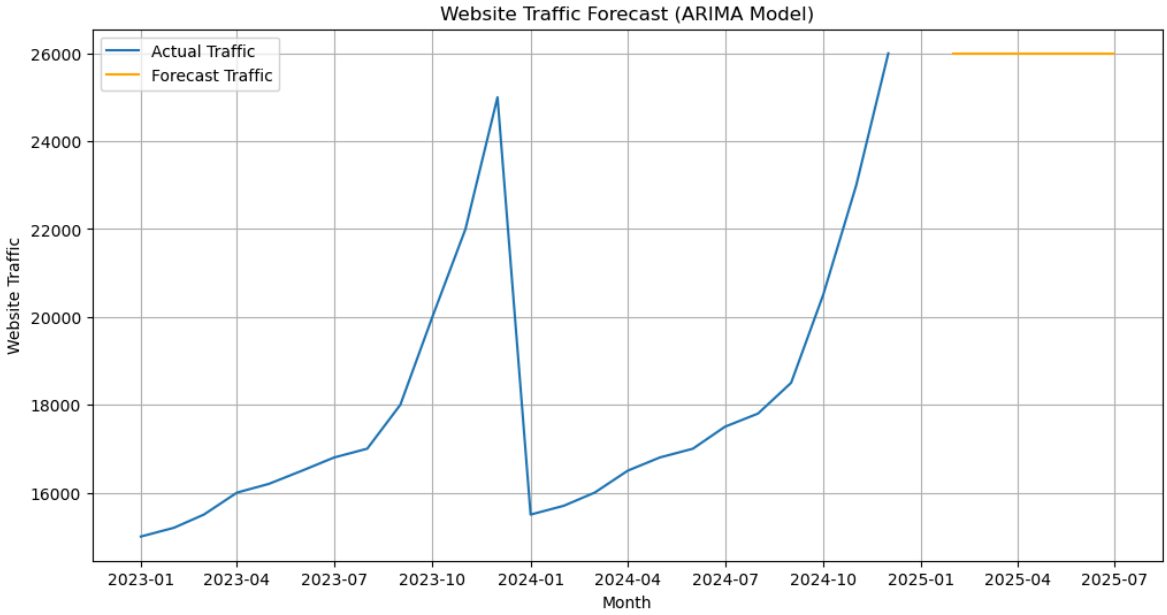
In [1]:
```
import pandas as pd
import matplotlib.pyplot as plt
from statsmodels.tsa.arima.model import ARIMA

# Load dataset
data = pd.read_csv('Website_Traffic_Data.csv', parse_dates=['Month'], index_col=

# Fit ARIMA model (simple config for test)
model = ARIMA(data['Traffic'], order=(1,1,1))
model_fit = model.fit()

# Forecast next 6 months
forecast = model_fit.forecast(steps=6)

# Create future date range
future_dates = pd.date_range(start=data.index[-1] + pd.DateOffset(months=1), per

# Combine actual and forecast data
forecast_series = pd.Series(forecast.values, index=future_dates)

# Plot
plt.figure(figsize=(12,6))
plt.plot(data['Traffic'], label='Actual Traffic')
plt.plot(forecast_series, label='Forecast Traffic', color='orange')
plt.xlabel('Month')
plt.ylabel('Website Traffic')
plt.title('Website Traffic Forecast (ARIMA Model)')
plt.legend()
plt.grid(True)
plt.show()
```

```
C:\Users\pc\anaconda3\Lib\site-packages\statsmodels\tsa\base\tsa_model.py:473: Va
lueWarning: No frequency information was provided, so inferred frequency MS will
be used.
  self._init_dates(dates, freq)
C:\Users\pc\anaconda3\Lib\site-packages\statsmodels\tsa\base\tsa_model.py:473: Va
lueWarning: No frequency information was provided, so inferred frequency MS will
be used.
  self._init_dates(dates, freq)
C:\Users\pc\anaconda3\Lib\site-packages\statsmodels\tsa\base\tsa_model.py:473: Va
lueWarning: No frequency information was provided, so inferred frequency MS will
be used.
  self._init_dates(dates, freq)
C:\Users\pc\anaconda3\Lib\site-packages\statsmodels\tsa\statespace\sarimax.py:96
6: UserWarning: Non-stationary starting autoregressive parameters found. Using ze
ros as starting parameters.
  warn('Non-stationary starting autoregressive parameters'
C:\Users\pc\anaconda3\Lib\site-packages\statsmodels\tsa\statespace\sarimax.py:97
8: UserWarning: Non-invertible starting MA parameters found. Using zeros as start
ing parameters.
  warn('Non-invertible starting MA parameters found.'
C:\Users\pc\AppData\Local\Temp\ipykernel_19084\3637150738.py:16: FutureWarning:
'M' is deprecated and will be removed in a future version, please use 'ME' instea
d.
  future_dates = pd.date_range(start=data.index[-1] + pd.DateOffset(months=1), pe
riods=6, freq='M')
```


Website Traffic Forecast (ARIMA Model)
Actual Traffic
Forecast Traffic
Website Traffic
26000
24000
22000
20000
18000
16000
2023-01
2023-04
2023-07
2023-10
2024-01
2024-04
2024-07
2024-10
2025-01
2025-04
2025-07
Month

In [ ]: