```
# -*- coding: utf-8 -*-
"""
Created on Mon Jun 17 12:40:34 2024

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"""

# Streamlit app
st.title('Reliance Industries Stock Price Prediction')

# Date input
start_date = st.date_input('Start Date', value=datetime.date(2024, 4, 24))
end_date = st.date_input('End Date', value=datetime.date(2025, 4, 24))

# Predict button
if st.button('Predict'):
    # Number of days to predict
    n_days = (end_date - start_date).days + 1  # Include both start and end dates

    # Convert the start date to a pd.Timestamp for comparison
    last_historical_date = data.index[-1].date()
    if start_date <= last_historical_date:
        forecast_start_date = last_historical_date + datetime.timedelta(days=1)
    else:
        forecast_start_date = start_date

    # Calculate the days to forecast from the forecast_start_date to the end_date
    forecast_days = (end_date - forecast_start_date).days + 1

    # Forecast the prices
    forecasted_prices = forecast_next_days(model, scaled_data, time_step=100, n_days=forecast_days)
    forecasted_prices = scaler.inverse_transform(forecasted_prices.reshape(-1, 1))

    # Generate the dates for the forecasted period
    forecast_dates = pd.date_range(start=forecast_start_date, periods=forecast_days, freq='D')

    # Create a new DataFrame for the forecasted prices
    forecast_df = pd.DataFrame(forecasted_prices, index=forecast_dates, columns=['Forecasted Close'

    # Display forecasted prices in a box
    st.subheader('Forecasted Prices for the Selected Period')
    st.write(forecast_df)

    # Plot the forecasted prices along with the historical data using Plotly
    fig = go.Figure()

    # Add historical data up to the forecast_start_date
    fig.add_trace(go.Scatter(x=data.index, y=data['Close'], mode='lines', name='Historical Prices')

    # Add forecasted data
    fig.add_trace(go.Scatter(x=forecast_df.index, y=forecast_df['Forecasted Close'], mode='lines',

    # Update layout
    fig.update_layout(
        title='Reliance Industries Stock Price Forecast',
        xaxis_title='Date',
        yaxis_title='Close Price (INR)',
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    hovermode='x unified'
)

st.plotly_chart(fig)
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