

In [52]: `import numpy as np`

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# Assuming you have predictions from Random Forest and ANN
random_forest_predictions = np.array([12.8602, 15.4445, 16.0847, 3.6695, 22.0441, 8.8111, 2.1985, 6.2898, 1.2322,
18.5063, 5.5302, 19.5081]) # Replace with your actual predictions
ann_predictions = np.array([6.4033184, 9.003891, 11.430597, 5.1087227, 20.707163, 8.588358, 5.595423, 5.002453, 7.510495, 15.34393])

# Combine predictions using a simple average
combined_predictions = (random_forest_predictions + ann_predictions) / 2

print("Combined Predictions:", combined_predictions)

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Combined Predictions: [ 9.6317592 12.2241955 13.7576485  4.38911135 21.3756315  8.699729
 3.8969615  5.6461265  4.3713475 16.9251175  4.9501753 18.328121 ]

```

In [53]: `from sklearn.metrics import mean_squared_error, mean_absolute_error, r2_score`

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# Actual stock prices for the same data points
actual_stock_prices = np.array([0.00, 15.33, 14.94, 12.09, 23.95, 9.39, 0.00, 0.00, 0.00, 21.58, 0.00, 20.67]) # Replace with your actual

# Calculate evaluation metrics for the combined predictions
combined_mse = mean_squared_error(actual_stock_prices, combined_predictions)
combined_mae = mean_absolute_error(actual_stock_prices, combined_predictions)
combined_r2 = r2_score(actual_stock_prices, combined_predictions)

print("Combined Predictions Metrics:")
print("Mean Squared Error:", combined_mse)
print("Mean Absolute Error:", combined_mae)
print("R-squared:", combined_r2)

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Combined Predictions Metrics:
Mean Squared Error: 24.004382613992274
Mean Absolute Error: 4.2289013041666665
R-squared: 0.7118754615337999

```

In [56]: `import matplotlib.pyplot as plt`

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# Data points for x-axis
data_points = np.arange(1, 13) # Assuming 12 data points for the predictions

# Plot actual values
plt.plot(data_points, actual_stock_prices, label='Actual', marker='o')

# Plot predicted values from Random Forest

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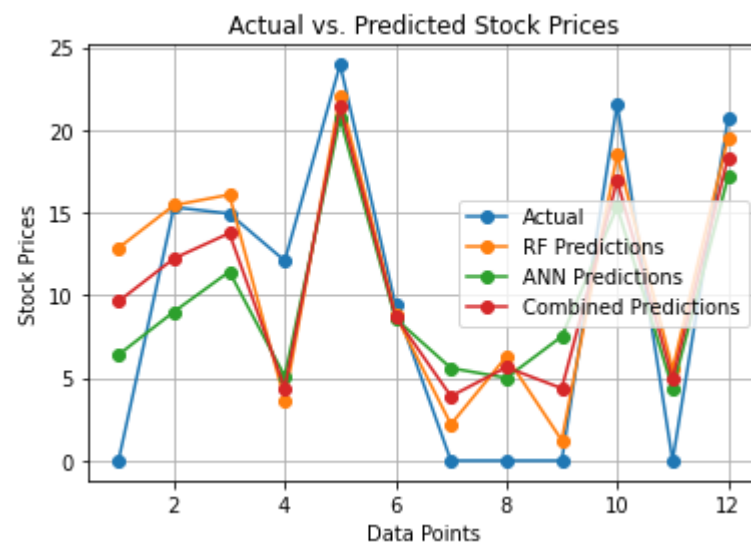
```
plt.plot(data_points, random_forest_predictions, label='RF Predictions', marker='o')

# Plot predicted values from ANN
plt.plot(data_points, ann_predictions, label='ANN Predictions', marker='o')

# Plot combined predicted values
plt.plot(data_points, combined_predictions, label='Combined Predictions', marker='o')

# Add Labels and Legend
plt.xlabel('Data Points')
plt.ylabel('Stock Prices')
plt.title('Actual vs. Predicted Stock Prices')
plt.legend()
plt.grid(True)

# Show the plot
plt.show()
```



In []: