Labor Markets in FRED®

Purpose.
1. Create a plot of the ratio of unemployed persons to job openings.
2. Change the graph's date range to show values since 2001 and add a user-defined line to the graph.
3. Describe and discuss patterns in the evolution of the ratio of unemployed persons to job openings over time.

Pedagogical Rationale. This assignment requires that you first look for data and plot them into a graph. Next, you will customize the data by adding a series and computing a ratio. Next, you will change the date range and add a user-defined line to the graph. Lastly, you will describe and discuss patterns in the evolution of the data series. These tasks will develop your proficiency in searching for, transforming, and interpreting data.

Grading. Your grade will be determined by (a) how precisely you complete the search and transformation data tasks and (b) how accurately you interpret the data.

Steps to Search for and Transform the Data.
1. Access https://fred.stlouisfed.org/ and search for "Unemployment Level (UNEMPLOY)"
2. Select "Thousands of Persons, Monthly, Seasonally Adjusted."
3. Click on EDIT GRAPH and select EDIT LINE 1.
4. Customize data by searching for "Job Openings: Total Nonfarm (JTSJOL), Level in Thousands, Monthly, Seasonally Adjusted" and click on "Add."
5. Customize the data by typing the formula "a/b" and click on "Apply."
6. Click on EDIT GRAPH and select ADD LINE.
7. Click on "Create user-defined line?" and then click on "Create line."
8. Type "1" as the value start and "1" as the value end.
9. Change the date range by typing "2001-01-01" as the start date of the graph.

Writing Prompts. Answer the following questions:
1. Between 2001 and the latest available observation, what has been the highest number of unemployed persons to job openings? When was that value recorded?
2. Between 2001 and the latest available observation, when was the ratio of unemployed persons to job openings less than 1 for the first time?
3. Consider a basic model of supply and demand for labor. In that context, does a number of unemployed persons to job openings less than 1represent a surplus or a shortage of labor? Explain your answer.
4. Notice the cyclical behavior of the ratio of unemployed persons to job openings. Briefly describe why that number goes up and down during economic recessions and expansions.