Exploring Universal Studios' Amusement Park Wait Times with SAS Visual Analytics

Description

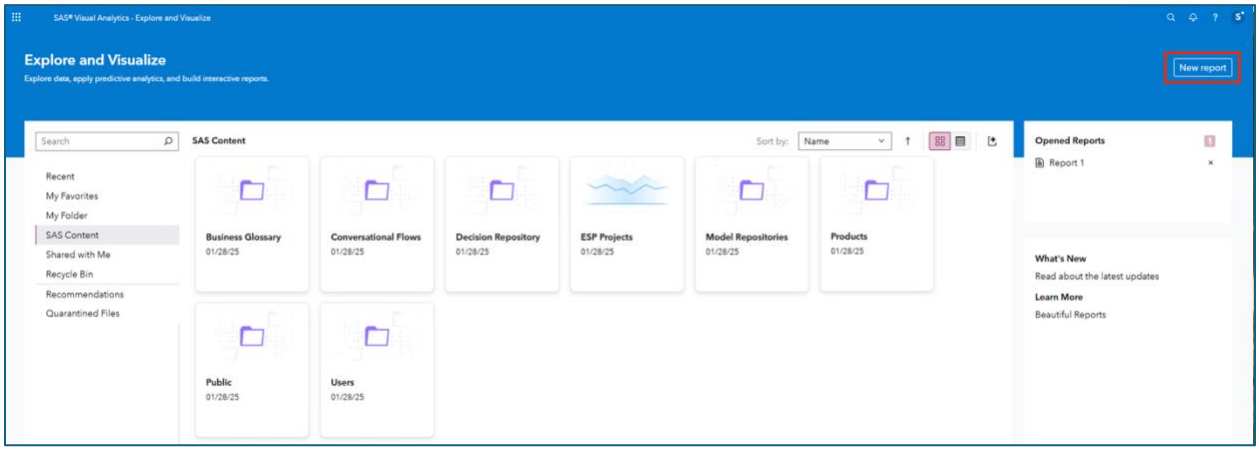
This use case walks through a basic visualization task within SAS Visual Analytics. Participants will explore the *Universal Studios Wait Time* dataset to analyze data about the amusement park, such as attractions, temperature, precipitation, and wait times. To complete the task, hackers will be asked a series of questions about their findings.

Objectives

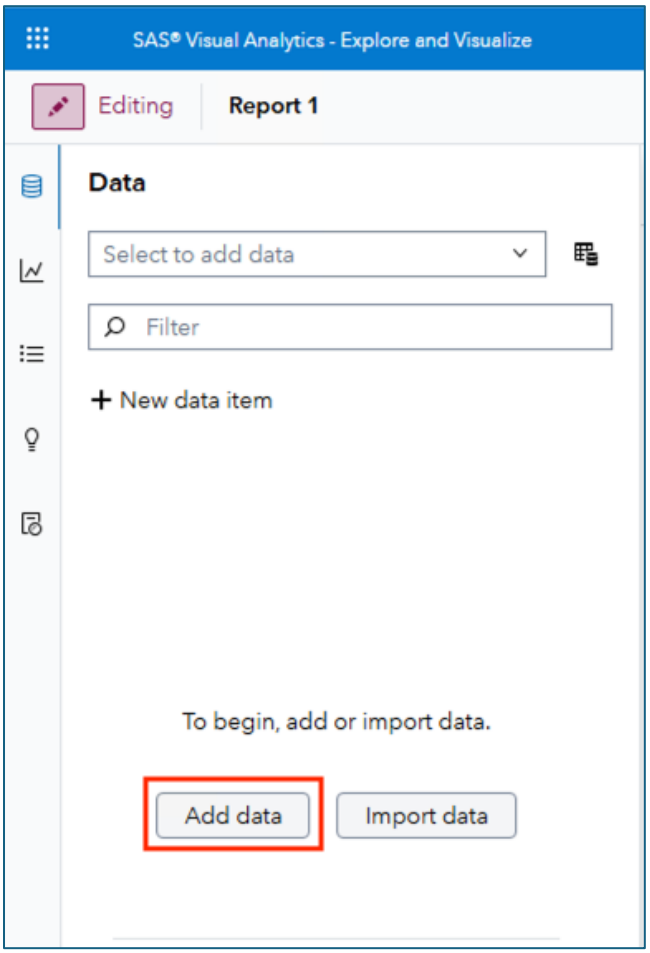
- Load the **WAITING_TIMES** datasets into a SAS Visual Analytics report.
- Explore the variables and trends with point-and-click visualization tools.

Step-by-step instructions

- Log into SAS Viya.
- Navigate to **Explore and Visualize** (SAS Visual Analytics) within the Application Menu.
- Start a **New report**.



- Add the *WAITING_TIMES* dataset to the report.



Choose Data

waiting

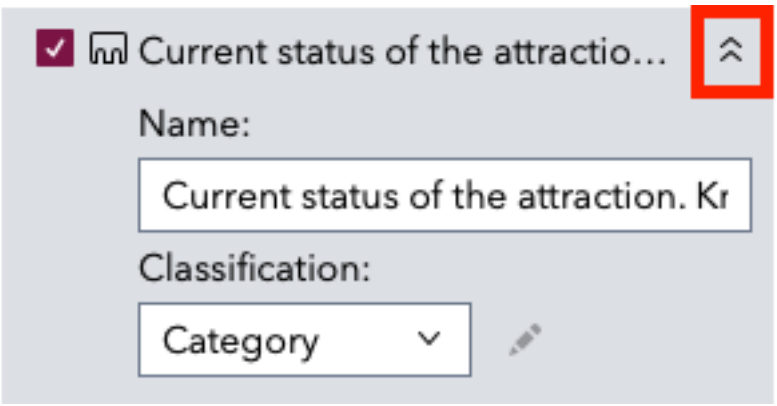
< Back | Results: **1-2 of 2**

	Name	★	Library
☑	WAITING_TIMES	☆	Public

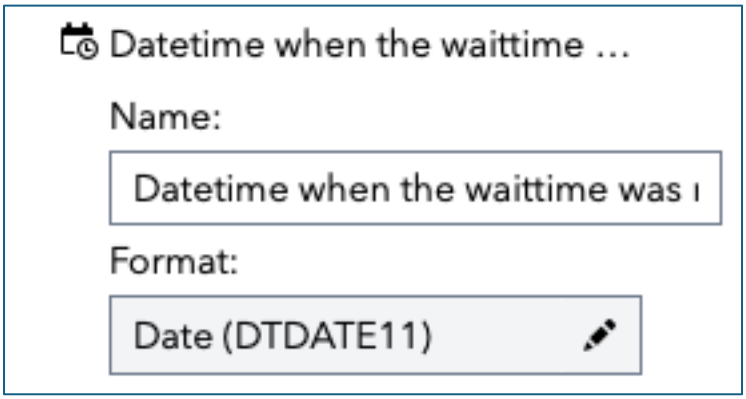
- Notice that the variables available in the **Data pane** are grouped into two main sections: **Category** and **Measure**. Take a moment to familiarize yourself with the variables available.

QUESTION 1: How many attractions are listed in the data?

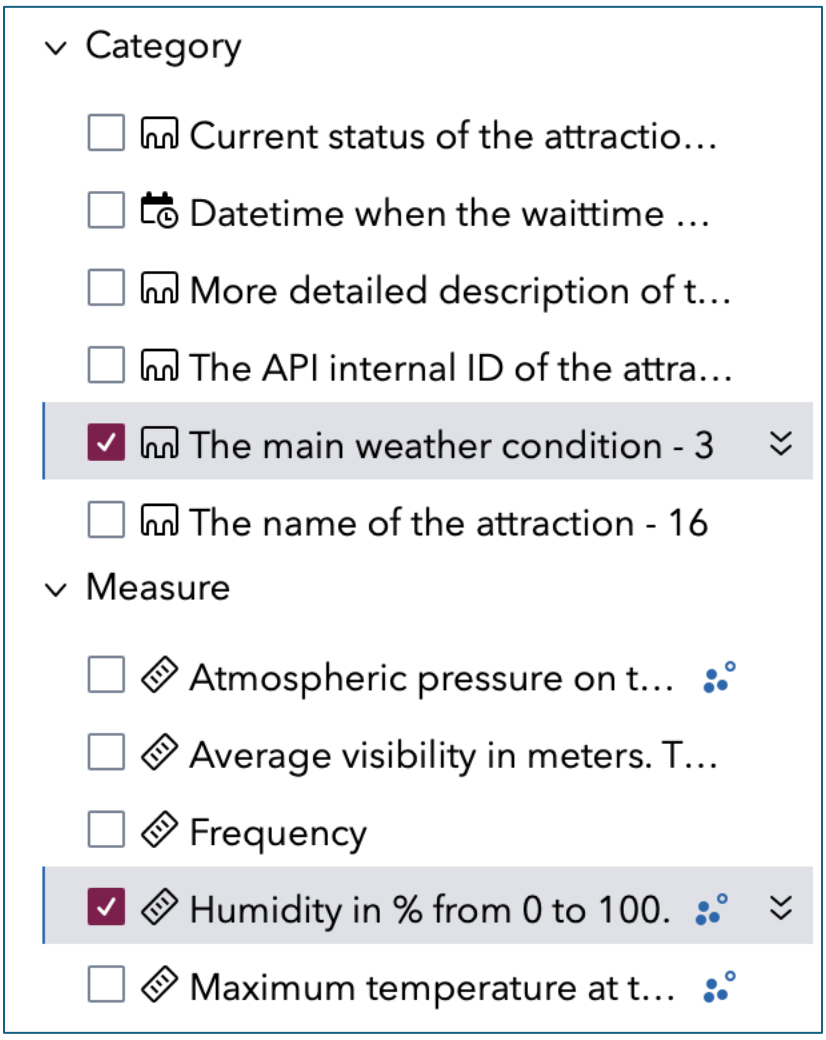
- Many of the variables are far from perfect. To change the name of a variable to make them a bit more useful, click the **Edit properties** drop down arrows next to the variable name.



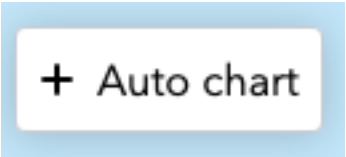
- Expand the properties for categorical, datetime, and measure variables – and notice that they have different options for what can be changed.
- For a better visualization, change the **Format** of "Datetime when the waittime was retrieved" to **Date**.



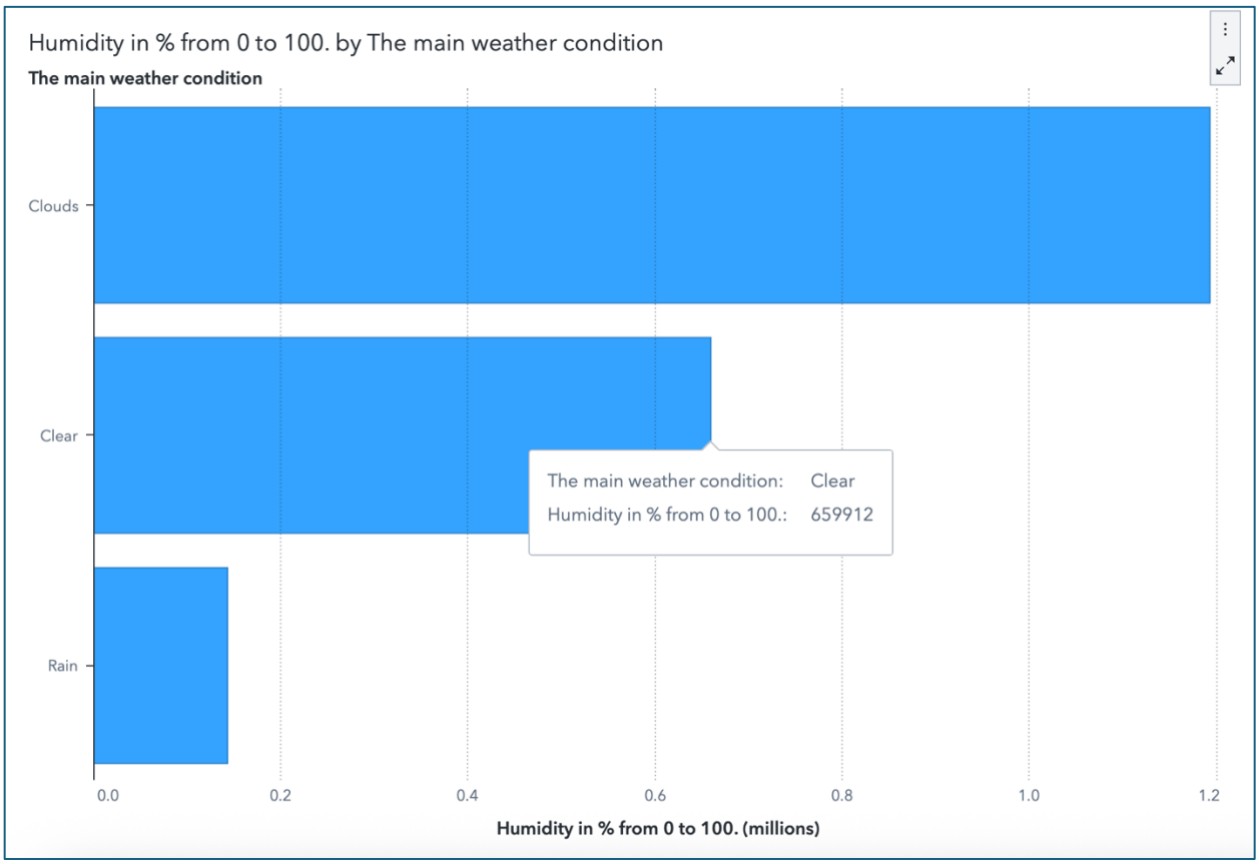
- **Measure** variables have a default aggregation of Sum, which is sometimes helpful... and sometimes leaves us with absurd numbers. Don't believe me? Select "The main weather condition" and "Humidity in % from 0 to 100" from the **Data** pane and drag the two variables onto the page.



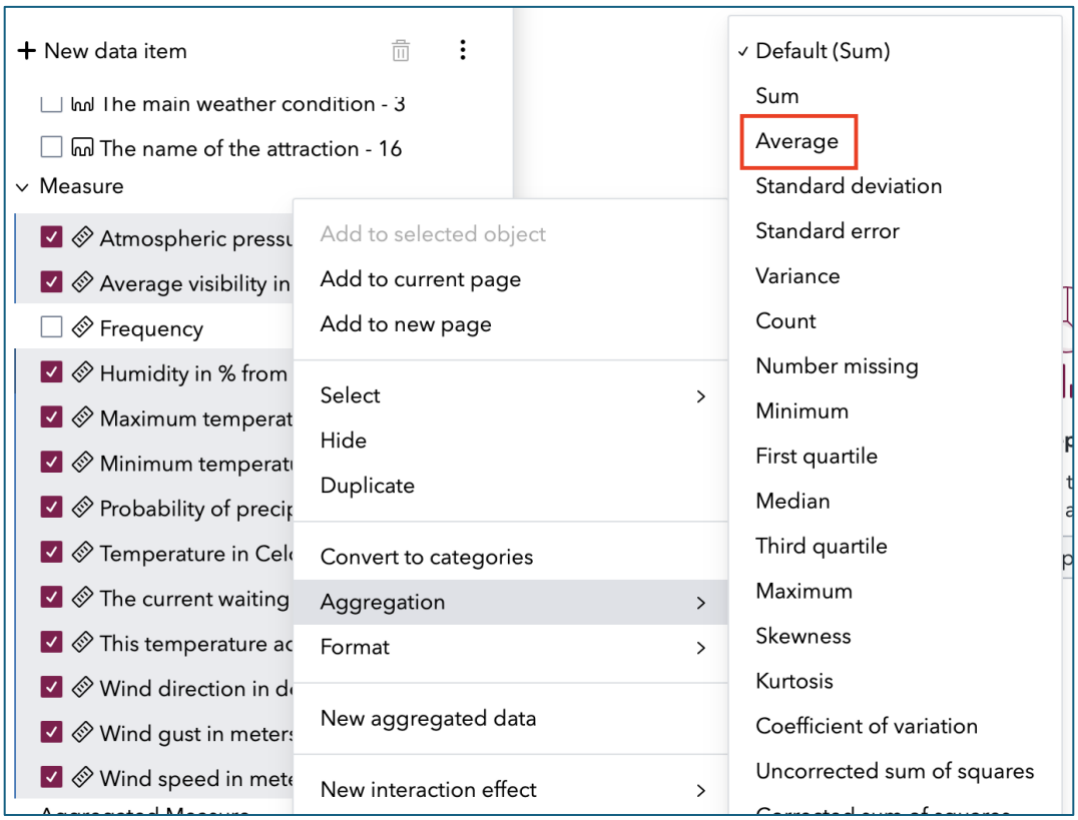
- You'll get a popup saying "+Auto chart" before you drop.



- And your visualization will look something like the following. I told you it was crazy numbers!



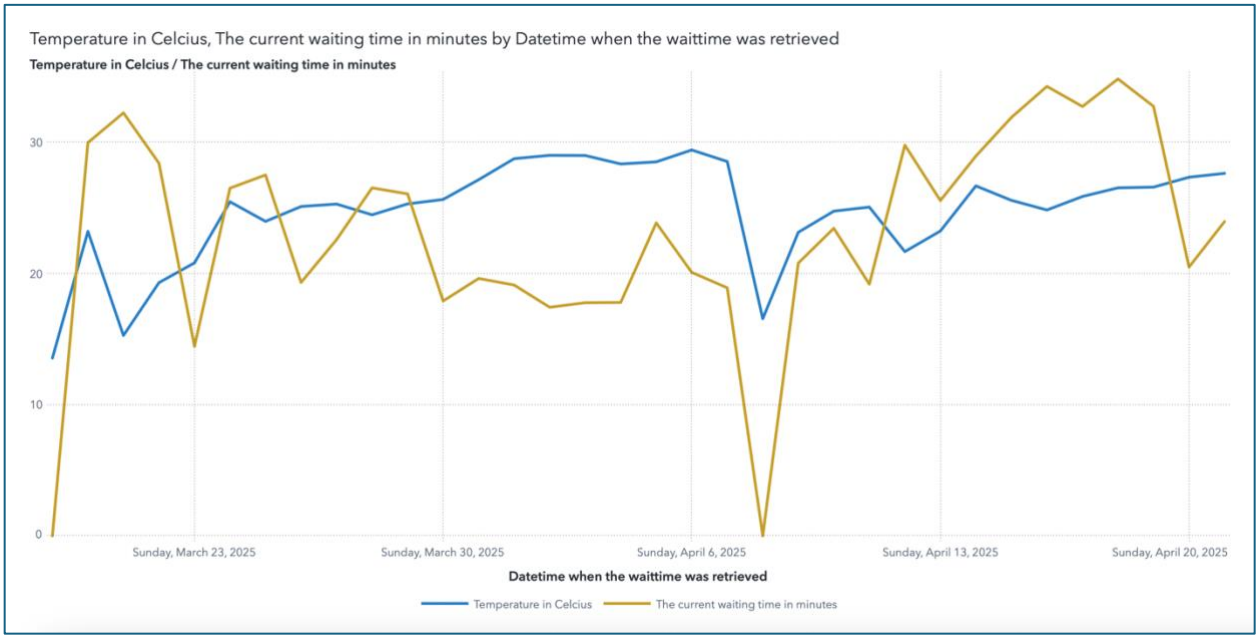
- Take some time adjusting variable names and formats, as well as changing aggregations to **Average** for all **Measure** variables except *Frequency*. Fun fact: You can do this in one swoop by selecting all the variables and right-clicking, like so:



- Note that changing variable names might create discrepancies in further instructions and screenshots.

QUESTION 2: Looking back at your bar chart for "Humidity in % from 0 to 100 by the main weather condition," which weather condition has the highest humidity percent?

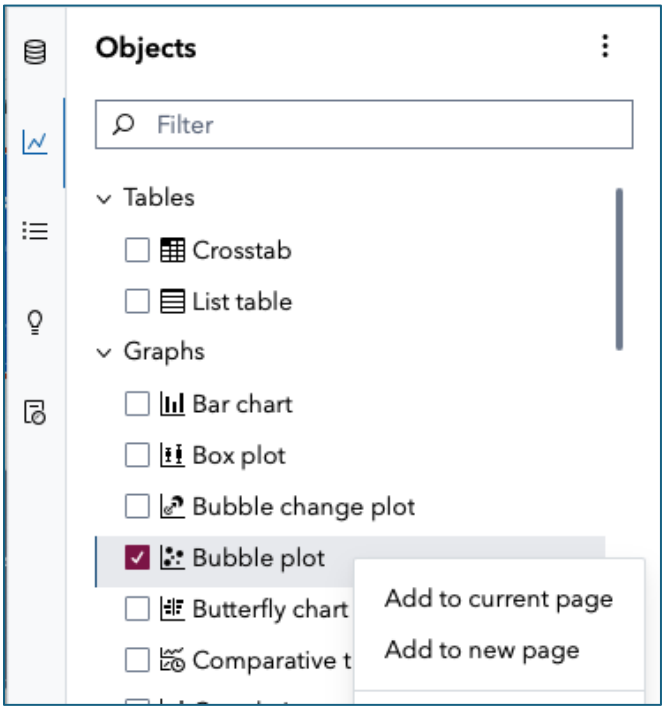
- Let's get down to exploring through visualizations!
- Drag-and-drop your *date* variable along with *Temperature* and *Current waiting time in minutes* variables onto the canvas.



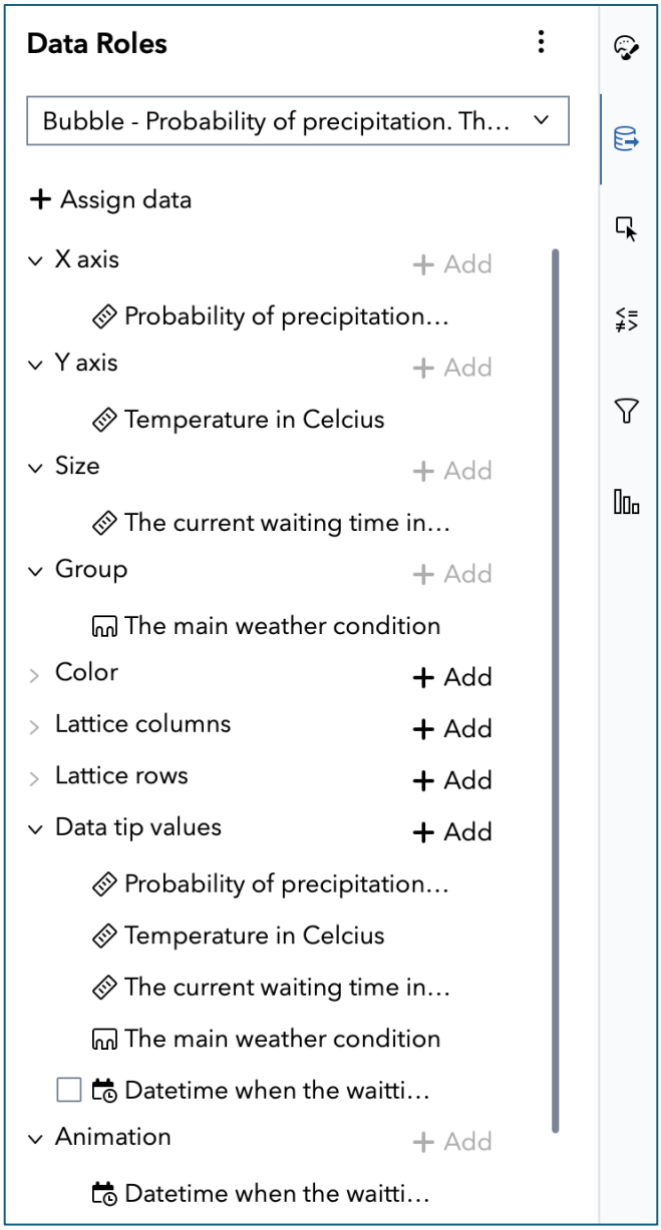
- What do you see?

QUESTION 3: Do you notice a particular trend between temperature and wait times?

- Time to finish strong with one more visualization – a bubble plot! This will allow us to see several dimensions of data. You ready?
- From the **Objects** pane on the left sidebar, right click the **Bubble plot** object and select **Add to new page**.



- You've added the bubble plot to your canvas, but you need to tell SAS which variables to use. Assign the following:
    a. X axis: Probability of precipitation
    b. Y axis: Temperature
    c. Size: Current Wait Time in minutes
    d. Group: Main Weather Condition
    e. Animation: Datetime when the waittime was retrieved



- You can now see snapshots of wait times by the temperature and precipitation, grouped by weather conditions – AND you can step throughout time to see how it changes.

QUESTION 4: Find the snapshot for Monday, March 24, 2025. What were the weather conditions on that day, and which had the longer waittime?