Streamlit test

1.How would you explain Streamlit to someone who is new to the framework?
Streamlit is an open source framework to build interactive machine learning, data science and various web applications.

2.Can you describe the main features and advantages of using Streamlit for building data applications?
Streamlit is simple and easy to use without having deep knowledge in web development. Availability of built-in widgets such as buttons, sliders, text input etc., makes it easier for creating web applications.We can also deploy applications in streamlit for free.

3.what is the purpose of the st.write() function in Streamlit, and how is it commonly used?
st.write is a versatile method to display content in streamlit application. We can basically display any content such as text, dataframes, charts, widgets, emoji etc., Example usage: st.write("Specific text."), st.write(dataframes) etc.,

4.Explain how widgets work in Streamlit and provide examples of different types of widgets.
Widgets in streamlit are interactive elements that allow users to input data or make selections. Example usage: st.button("Click me!") for buttons, st.slider("Select a value", 0, 10, 5) for sliders, and st.selectbox("Choose an option", ["Option 1", "Option 2"]) for dropdowns.

5.How can you handle user inputs and interactions in a Streamlit application?
st.text_input() can be used to handle user inputs and interactions in a streamlit application.

6.Discuss the role of caching in Streamlit and when it might be beneficial to use it.
Caching in streamlit can be achieved with @st.cache, optimizes performance by storing and reusing function results. It's beneficial when fetching huge data to avoid unnecessary recalculations and improve app responsiveness.

7.What is the purpose of the st.sidebar in Streamlit, and how is it typically utilized?
st.sidebar is used to create a separate resizable sidebar where we can add information such as filters and menu options to improve the user interface.

8.Explain the concept of reactive programming in the context of Streamlit.
In streamlit, reactive programming refers to the automatic re-execution of code when there are changes in inputs, allowing the app to dynamically update and respond to user interactions without explicit calling or updation.

9.How does Streamlit handle the sharing of data between different components in an application?
Streamlit handles the sharing of data between components through the use of variables that are declared outside the function.

10.Can you compare Streamlit to other popular web frameworks used for data applications, highlighting its strengths
Streamlit provides easy usage ,simplicity and can create interactive web applications without having deep knowledge in web application development when compared with dash which requires extensive knowledge in html to create basic web applications.