Each lab in this course builds a component of an online quiz application.

Let's review the details of the application.

The quiz application has a front end service and a backend services.

Quiz authors can submit questions. These questions and answer choices are stored in Cloud Datastore. Any artifacts related to the question, such as images and videos, are stored in Cloud Storage.

Quiz takers submit quiz responses, as well as free form text with their feedback on the quiz. These responses are published as messages in a Cloud pops-up topic.

The backend service retrieves each message from the Cloud pops-up topic. It analyzes a free form text using natural language API and determines a sentiment score. Because we expect this quiz application to be used extensively by millions of users around the world, the backend service stores the responses and the sentiment score in a Spanner database. A leader board displays the top quiz takers. Lab instructions will guide you through the lab exercise. To maximize your learning, try to write the code without referring to the completed code block at the end of the section. Also review the code, inline comments, and related API documentation. In the lab storing application data and Cloud Datastore, you will learn how to use Cloud Shell as your development environment. You will use Google Cloud Client Libraries to integrate Cloud Datastore into the quiz application.