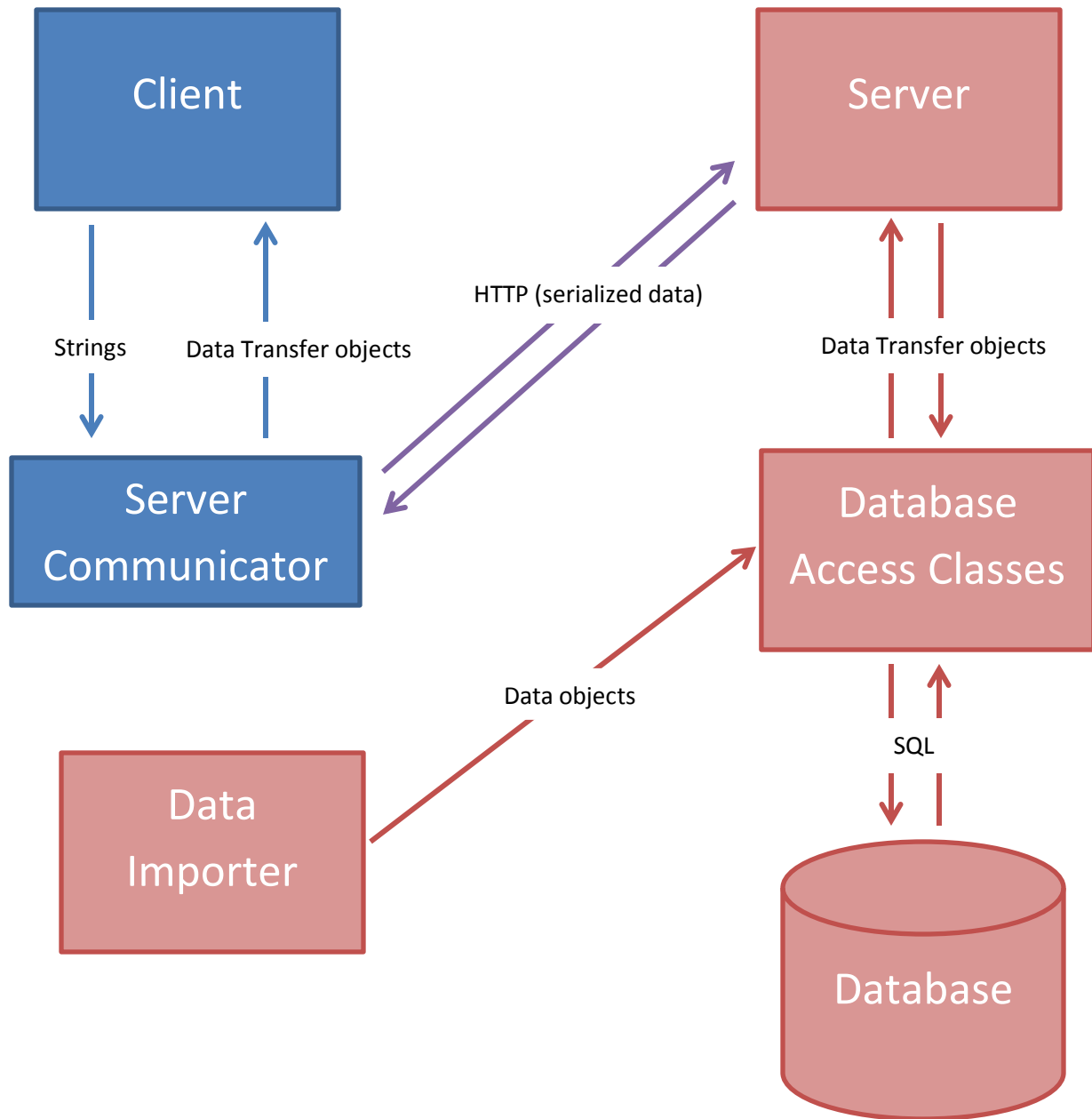


Project 1 Data Transfer Diagram



See next page for a more detailed explanation of each.

Design Explanation

Database Tables

There should be one table for each type of data object (like fields, projects, and users), with columns to represent the information each object needs.

Some objects “belong to” other objects, so their tables should reflect that. For example, an image belongs to a specific project. When you need to reference a table to another, think about how to map many-to-one relations. A projects has no idea how many or what images it has, but an image knows what project it belongs to.

Data Classes

Each of these represents a single row in one of your tables.

Data Access classes

These are the classes you use to talk directly to the database by creating and running SQL statements. You’ll need ways to update, add to, delete from, and insert into each table. In addition, you need to be able to do the main project operations (download a batch, validate a user, etc) using the data transport objects that come through the server from the client.

Data Transport classes

These classes are shared between the server and client, and are intended to wrap around the information that needs to be sent between the server and client. Generally you’d have two classes for each operation you want to do--one for sending from the client to the server, one for sending from the server back to the client.

Server Communicator

This is a client-side object. The client makes requests(download a batch, validate a user, etc.) using the server communicator. The server communicator then packages up the request and sends it to the server using the data transport objects. It’s a go-between: it doesn’t know anything about the database, it just makes HTTP requests to the server and returns the responses the server sends.

Server

This class receives and handles HTTP requests. It also doesn’t know anything about the database. Requests come from the server communicator, and the server then asks the database access classes to process the requests. It sends the results back to the server communicator using the data transport classes.

Data Importer

This class uses an XML parser to populate your tables by reading data from the provided XML files. It won’t be doing any SQL itself; it will use the access classes you’ve already created to add to the tables.