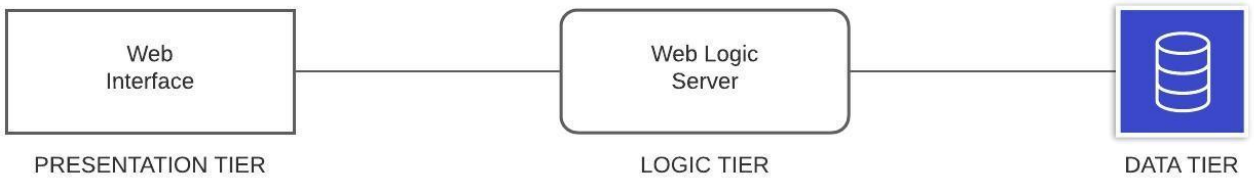
ARCHITECTURAL STYLE

The implemented online web auction system follows a three-tier architecture. It has a client component (front end application), middle tier component, and backend tier component. The three tier architecture is as shown in the figure below.



Client Component (Presentation Tier)

The client component usually contains programs executed by users, including Web browsers and network-capable application programs. For the current system's client interface HTML pages act as the front end. For the user interface we have deployed servlets and JavaScript pages in SQLite3 Server.

Middle Tier component(Logic Tier)

The middle tier of the web auction system consists of SQLite3 Server. For the implementation of the project only a single SQLite3 server has been chosen. But for the purpose of scalability, additional SQLite3 servers can be added. By having the SQLite3 Server cluster option we can distribute client requests and back-end services among multiple SQLite3 Servers.

The cluster uses a selectable load-balancing algorithm to choose a SQLite3 Server in the cluster that is capable of handling the request. Applications can be made easily scalable by having a middle-tier server and reliability, scalability, and high performance can be easily achieved.

Backend Tier component(Data Tier)

Database is the backend tier component in the three tier configuration where information processed by the application is processed and managed.
We have chosen SQLite3 for the database.
After the installation of the database components, an auction user is created and appropriate tables that store the user, bidding, and transaction data are created.