

Architecture Design

1. Architecture in the small - individual programs decomposed into components. This program is comprised of 5 years of data from google and apple and includes simple features such as acquiring the news and logos.
2. How will the system be distributed across hardware cores or processors?
 - This would be distributed through dedicated servers and databases. Dedicated servers and databases allow the client user to host an application on a server that isn't shared with anyone else.
3. Is there a generic application that can act as a template that is being designed?
 - Hardcoded the application - based sql/ php, and did not use a 3rd party library
 - Features - News on the company and simple logo
4. What architectural patterns or styles are used?
 - Follows MVC patterns - UI and software logic are separated in order to
 - i. Model - software logic - mariaDB + mySQL
 - ii. View - HTML+CSS Bootstrap
 - iii. Controller - communication between user and model, PHP connects the html+css to connect to mySQL
5. What approach will be used to structure the system?
 - **Define the problem** - First, we establish what needs to be completed for the application. In this case, the main purpose of the application is to report a 30 trading days price list with specific fields.
 - **Planning** - Then, we study the different platforms that are required. Inputs, outputs, and processes required for the new system are identified and a basic plan in the form of flowcharts or pseudocode are developed. We get ourselves familiar with MariaDB, Postman, Restful API, mySQL, Conversion tools etc. We've identified that PHP will act as the business server to connect the database (mySQL, Maria DB) and frontend (HTML+CSS). After familiarizing ourselves with IEX API, we ensure that JSON should receive API calls. We begin our plan to get JSON to SQL form.
 - **Building** - In this process, the software will be coded and tested. First, we need to install the applications that are needed to build the software. We create a folder to store relevant source files, html, etc in XAMPP. Application will be ready to be tested on a web browser. MyPHPadmin will also help, with setting up database and table configuration. Take the SQL files, and made

adjustments to comply with the specific fields. Once the conversions are done, import them to our database using myPHPadmin. Used a third party conversion to convert JSON to SQL form. Any updates would be done being read, converted, and inserted with PHP and MySQL.

- **Checking the solution** - Checked if the application works for the other members in the group.
 - **Modifying the solution** - During the testing phase, problems or possible improvements (from beta testing) may be found. If problems are found, modifications may be made to solve the problems and another round of testing will occur.
6. How will the architectural design be evaluated? And how should it be documented?
- Ease of view
 - Simplicity
 - Cost-efficient - how much work is being done to complete
 - Efficiency
 - Acceptability
 - Maintainability
 - Performance