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COS 301 - Indoor Mall Navigation Architectural Requirements and Design Documentation

Brute Force

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Contents

1	System Type	3
2	System Architecture	3
3	Non-functional Requirements	4

1 System Type

System:
User Application

Event-Driven:
Change in beacon ranges provide state changes that alter the system output

2 System Architecture

Client-Server: Main System
(Client: Indoor Mall Navigation Application, Server: Database Management System)

Micro-services:
Each Client (Application)

MVC:
Micro-services Provided by Each Client Object-Persistence Framework:
Database Management System

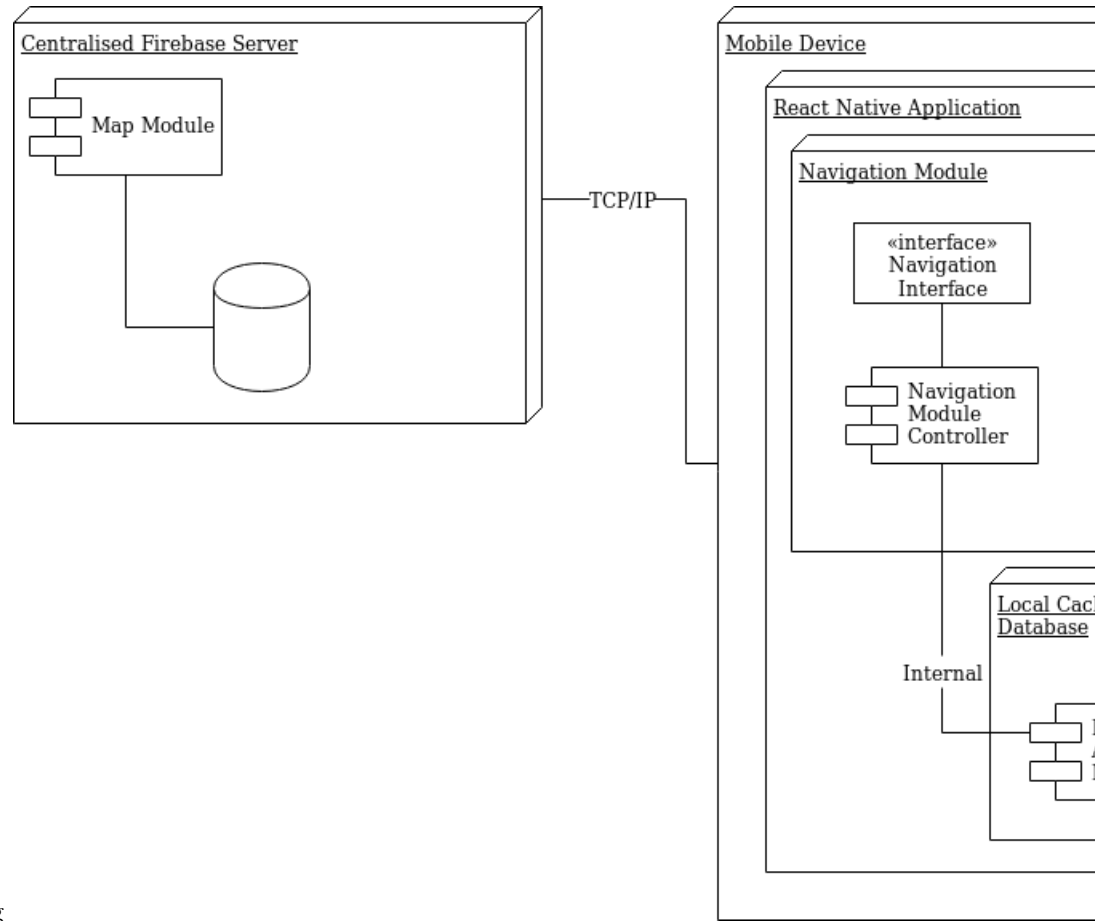


diagram.png

Figure 1: Model.

3 Non-functional Requirements

Scalability

We intend to have a user interface that allows mall owners to add stores to the list as well as supporting expanding maps.

We plan to use Firebase to ensure that our Database can keep up with the needs of the system.

Reliability

We intend to use beacons for accurate indoor navigation to specific shops.

Availability:

We intend to use firebase cloud database hosting and offline synchro-

nization to ensure that the