

2022 Software Engineering Project

# StyleReserve Service for LG Styler

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# Contents

1

## Motivation

- Consumer Trend Analysis
- Company & Product Analysis
- Problem Statement

2

## Project Introduction

- Overall Introduction
- Application Architecture
- Demo of the Service

3

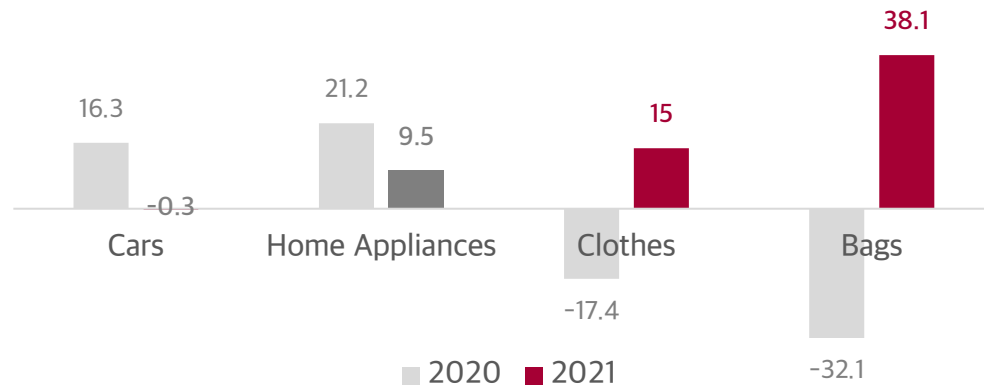
## Conclusion

- Conclusion
- Future Plan

Based on the customer's needs of external activities, convenience and hygiene, and demand for clothing managers, team thought LG Styler would be interesting product for the project

### Interest in External Activities & Pyunrimium

[ Comparison of Consumption Change for Each Item (2020-2021) ]<sup>1)</sup>



- Due to the easing of COVID-19, many people are enjoying outside life such as festivals and eating out again
- Interest in clothes, which is the basis for enjoying outside and out-of-home life, is also growing
- Based on the trend 'Pyunrimium' which is the collaboration of 'Pyunri' meaning convenience in Korean and 'Premium', the clothing manager itself is becoming a home trend

### Demand for Clothing Managers

[ Home appliances that want to replace/get in the future ]<sup>2)</sup>



- Clothing Managers are listed as the No. 1 home appliances that people hope to purchase within the next year
  - MZ generation selected "clothing managers" as household appliances that want to purchase and replace, and are especially willing to buy LG Stylers among various brands
- ➔ This was judged to be a long-term positive demand for clothing management, not just a short-term

1) Kostat Survey, 2021

2) DaehakNail Home Appliance Trend Report, 2022

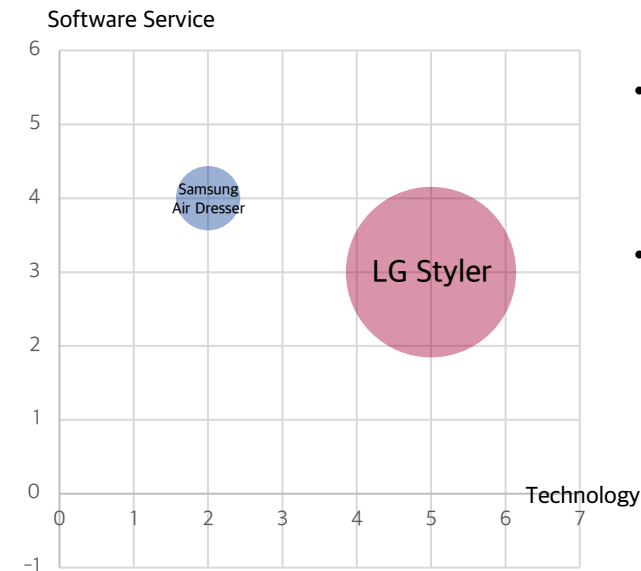
After looking at company's trend and product analysis,  
team decided to propose a new software for LG Styler based on the customer's needs

### Company Trends



LG Electronics is developing a variety of software based on 'LG UP-home appliances' and aims at providing more advanced smart home upgrade experience that allows users to receive good services without buying new home appliances

### LG Styler Analysis <sup>1)</sup>



- Based on various patents, LG Styler provides effective clothing management that differentiates itself from other brands
- However, as competitors, who are latecomer brands in this market and failed to have efficient patent, try to gain the upper hand by focusing on software features, there is a need of providing additional software features for LG Styler that will help user's experience

Plan to propose a new software that reflects the trend of LG Electronics' "UP-home appliances",  
and solves even minor inconveniences for consumers using Stylers.

1) Danawa Research of Clothes Manager, 2019-2020  
- Technology: Number of patents / Software Service: Number of additional functions / Size of Bubble: M/S

Based on the predicted user problems while using LG Styler,  
we plan a service that can make the consumer's LG Styler experience better

P1

Fight with sister everyday  
while sharing clothes



**Ms. Heo**  
(Age: 20s)

My sister and I are similar in size, so we share most of our clothes. It's very embarrassing if we want to wear the same clothes on the same day. It's kind of a war to preoccupy

P2

Someone is using a styler  
at the time I desired



**Mr. Kim**  
(Age: 20s)

It's hard to check whether LG Styler is off with many users. Even if I get a chance, I must wait a long time, so there are many cases where others can't use it even if they want to

P3

Have to go out quickly,  
but clothes are wrinkled



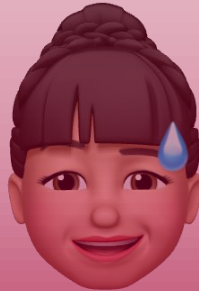
**Mr. Lee**  
(Age: 20s)

Today I have a very important meeting, but I forgot to prepare my clothes. It would have been nice if I had set up my clothes in advance yesterday, but I was too tired to prepare

Based on the predicted user problems while using LG Styler,  
we plan a service that can make the consumer's LG Styler experience better

P1

Fight with sister everyday  
while sharing clothes



Ms. Heo  
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P2

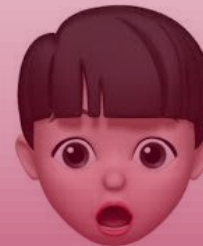
Someone is using a styler  
at the time I desired



Mr. Kim  
(Age: 20s)

P3

Have to go out quickly,  
but clothes are wrinkled



Mr. Lee  
(Age: 20s)

Reserve your Style, Deserve your Usage,

# STYLERESERVE



### | LG STYLER |



- Basically, it's a product that removes dust and wrinkles from clothing
- Additional effects can remove odors and sterilize them
- It also has a low-temperature dehumidification and drying function, so it has the characteristics of the dryer

➔ Appliance that literally manages clothing



## StyleR + eserve

*Reserve your Style,  
Deserve to use Styler*

### | Styler Calendar especially for workplaces |

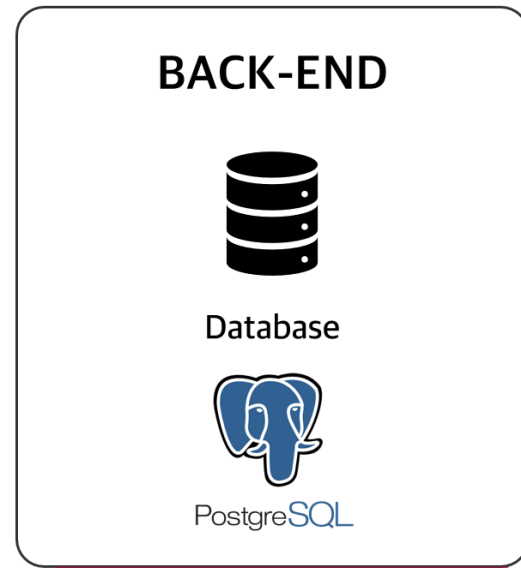
- Can schedule the use of a Styler in the schedule calendar
- If there are any hangers left in Styler, other people can also make reservations together

### | Styling Calendar for family with same closet |

- Can make a reservation by taking clothes from the closet database
- Intend people to wear clean, neat clothes on important days

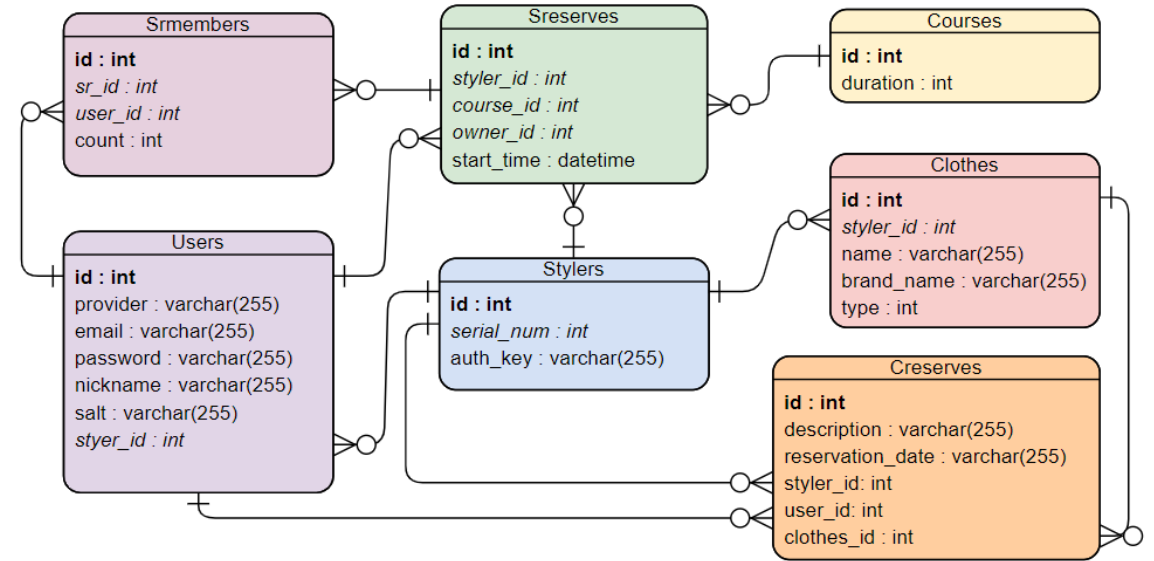
### | Closet Database |

- Can store clothes that I have and easily check what reservation is done



### Reason Why We Choose PostgreSQL

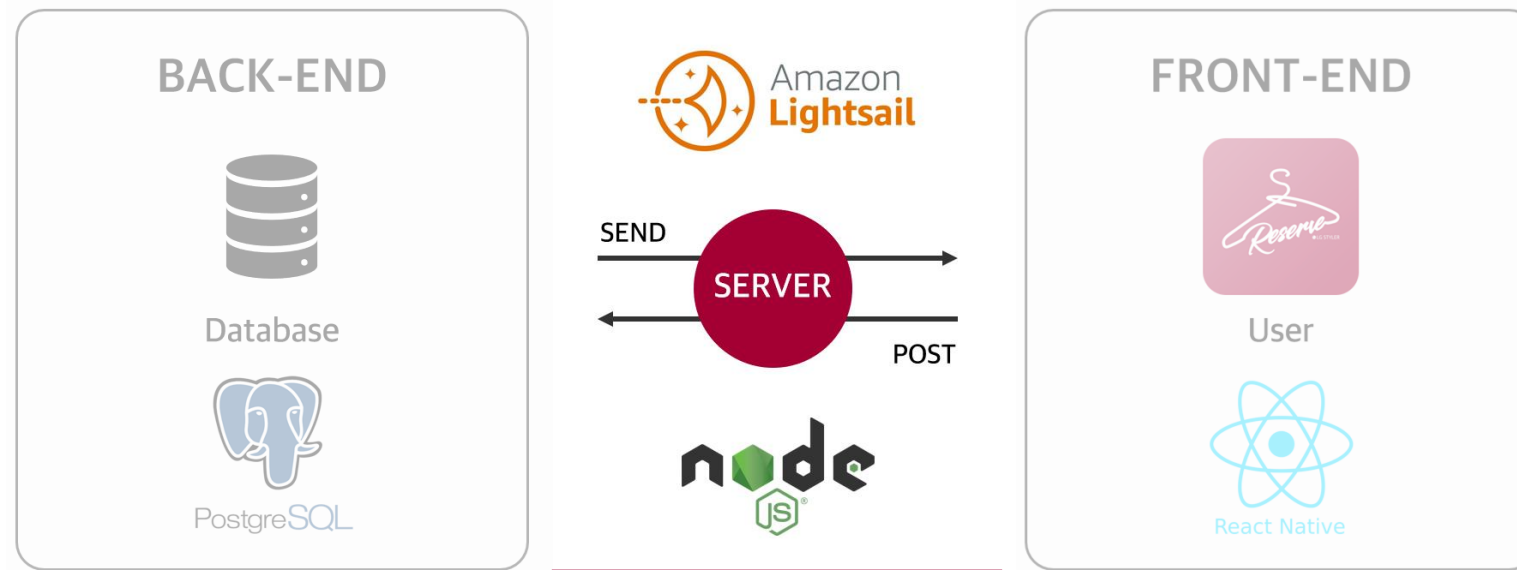
- Since the data must have complex relationships with each other and continue to be modified in this project, RDBMS was selected with good integrity
- PostgreSQL was selected in that it guarantees stability as an open-source DBMS, supports many extensions and data types, and is updating steadily



### Implementation

- Consists of four tables: that manages the information of users using the application, that manages the user's Styler usage reservation status, that builds a single closet system based on clothing data, and that manages the reservation status of clothing for styling reservations
- Back-end receives the user account, stores it in the database, and verifies that the user is still using the application.



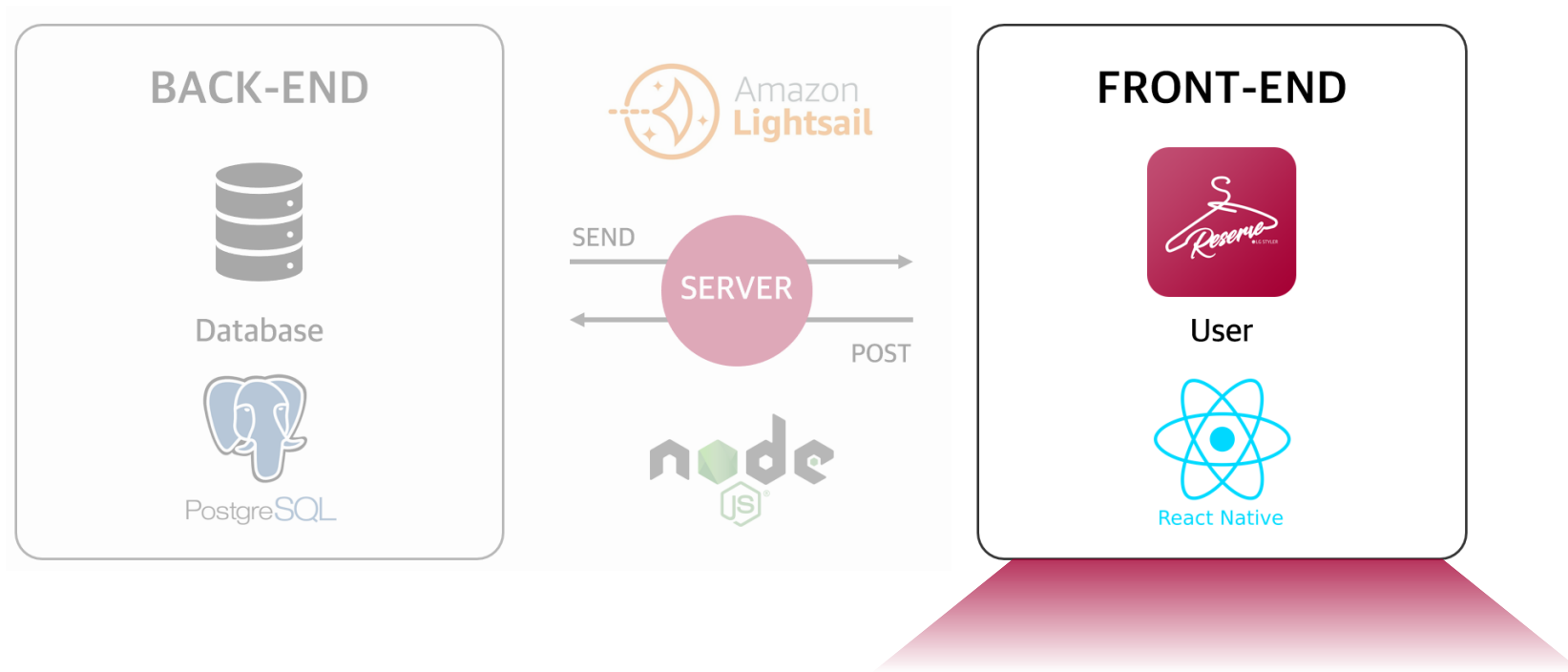


### Reason Why We Choose AWS Lightsail

- It has the advantage of simple and clear setup screens such as databases and networking, and can control charging time
- Currently, students with student certification are given free access to the service for three months, which was helpful for us in terms of cost

### Implementation

- Node.js contains code that allows users to respond to requests generated while using the application
- Allows the server to generate query statements based on the parameters of the request to read or write data



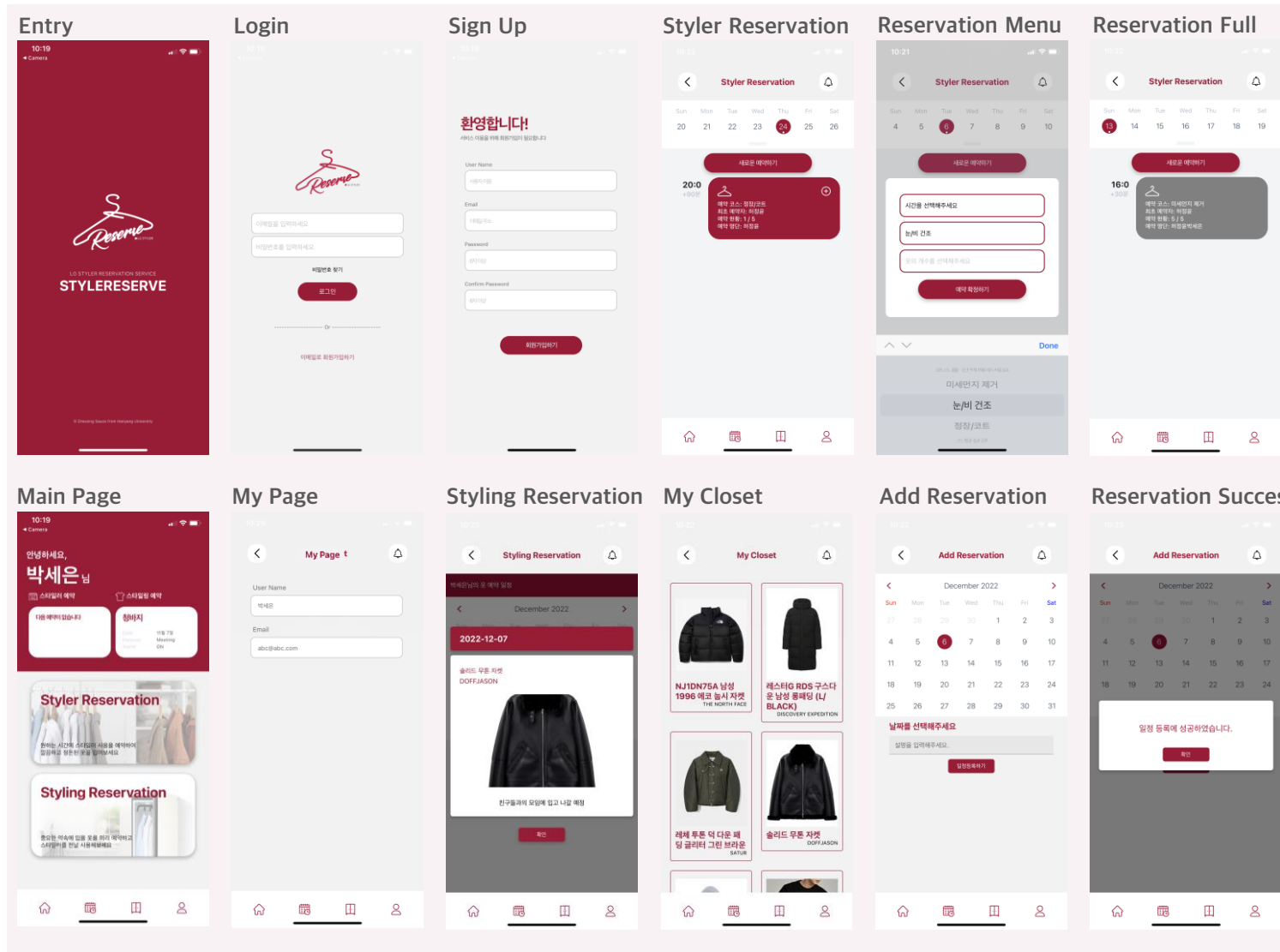
### Reason Why We Choose React Native

- It has a great advantage in that it can develop iOS and Android apps simultaneously
- Is a strong developer tools with meaningful error messages are basically included in the framework, helping effective implementation in a short time

### Implementation

- The calendar within the application allows users to see the status of their Styler reservations, especially when available and when not available through color separation
- Users can also check the current status with Styling reservation that runs from the closet to the reservation page

## 2-2. Demo of the Service



StyleReserve Usage Guide



StyleReserve Demo Video

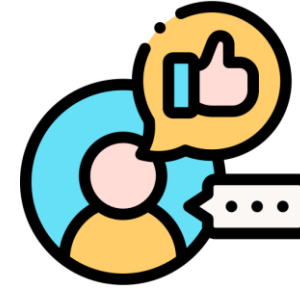


### | Conclusion |



- Our team considered the use of a **Styler in the home**, while further considered the use of a Styler in the office
- Based on this idea, a **Styler reservation** function is created for a large number of users, and a **Styling reservation** function for a user who shares the same closet

### | Future Plan |



- At first, functions such as **recommendation based on Instagram hashtags or weather information** through the installation of the display were considered, but it could not be carried out due to the project period
- In the future, we would like to not only supplement existing function, but also develop software with functions that **even can recommend clothes**

Beyond the current state of providing **Reservation for LG Styler users** ,  
Extends to **Multi-Functionality Software** that provides functions including recommendations or music playback

한양대학교 X LG전자  
HANYANG UNIVERSITY

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