



# Vivekanand Education Society's Institute Of Technology

## Department Of Information Technology

# Smart Home Application

Your Ultimate Smart Living Companion

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ROLL NO : 60  
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# INTRODUCTION

- Welcome to Smart Living: Explore the world of smart home automation, revolutionizing modern living.
- Effortless Control: Experience the convenience of managing your home from anywhere, with just a tap or a voice command.
- Total Security: Enjoy peace of mind with advanced security features, keeping your home safe and protected around the clock.
- Energy-Efficient Solutions: Embrace sustainable living with smart energy management, saving both money and the environment.

# PROBLEM STATEMENT

In today's fast-paced world, homeowners grapple with managing their homes efficiently, facing challenges ranging from security vulnerabilities to energy waste.

- Inefficient energy usage leading to higher utility bills.
- Concerns about home security and safety when away from home.
- Lack of convenience in managing and controlling home appliances and devices.

# OBJECTIVE

- Enhance Convenience: Develop an intuitive app interface for easy control of home devices.
- Ensure Security: Implement robust security features for real-time monitoring and protection.
- Promote Energy Efficiency: Optimize energy usage through smart scheduling and monitoring.
- Enable Customization: Allow users to personalize automation rules to suit their preferences.

# SMART HOME

## SYSTEM REQUIREMENTS

# HARDWARE

Compatibility and reliability are key considerations when selecting hardware.

REQUIRMENT 01

## Internet Connection

REQUIRMENT 02

## Smart Devices

SOLUTION 03

## Mobile Devices

REQUIRMENT 04

## Smart Home Hub

# SMART HOME

## SYSTEM REQUIREMENTS

# SOFTWARE

The smart home automation project can deliver a seamless and secure user experience.

REQUIRMENT 01

## FLUTTER SDK

REQUIRMENT 02

## DART

SOLUTION 03

## ANDROID STUDIO IDE

REQUIRMENT 04

## ANDROID EMULATOR

REQUIRMENT 05

## FIREBASE

# IMPLEMENTATION



# SMART HOME

sign into  
mange your device & accessory

lex123@gmail.com



lexabc123



Get Started

Don't have an account yet?

# LOGIN PAGE

# Homepage

Hi, Lex

Living Room Dining Kitchen

28°C  
Cloudy  
27 Mar 2022  
Jagakarsa, Jakarta

Energy Saving  
+35%  
23.5 kWh

Lightening  
4 lamps  
On

AC  
4 devices  
Off

Music  
Give a Little Bit

←  
Smart  
Fan  
Room

Power



Mode

Air

Mild

Breeze

Speed

4

Off

100%

Schedule

Set schedule room fan



# DEVICE 1

# DEVICE 2

←  
Living  
Room  
Speaker



3:15 | 4:26

**STAY**

Justin Bieber Ft. Kid Laro



Schedule

Set schedule speaker



← Favourites



Light

1 device

On



Kitchen



Fan

2 devices

On



Kitchen



Speaker

1 device

Off



Kitchen

FAVOURITES

# SET EVENTS

## Set Events

X



April 2024



Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

+ Add New Event

# Stats

Weekly

Daily

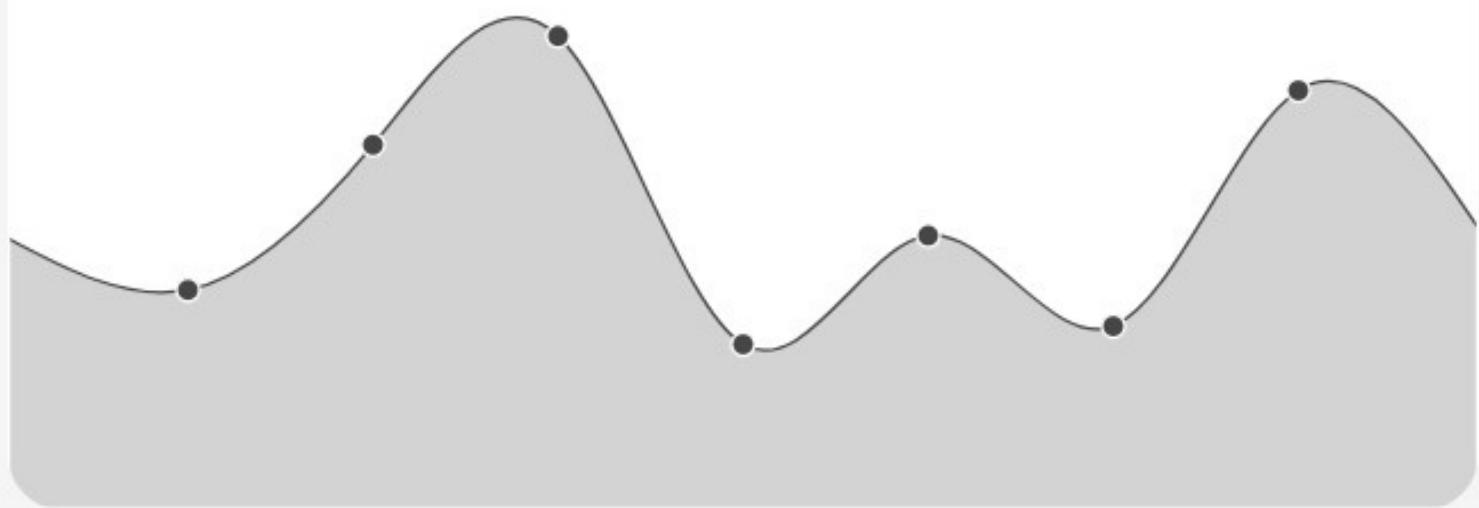
Monthly



Daily

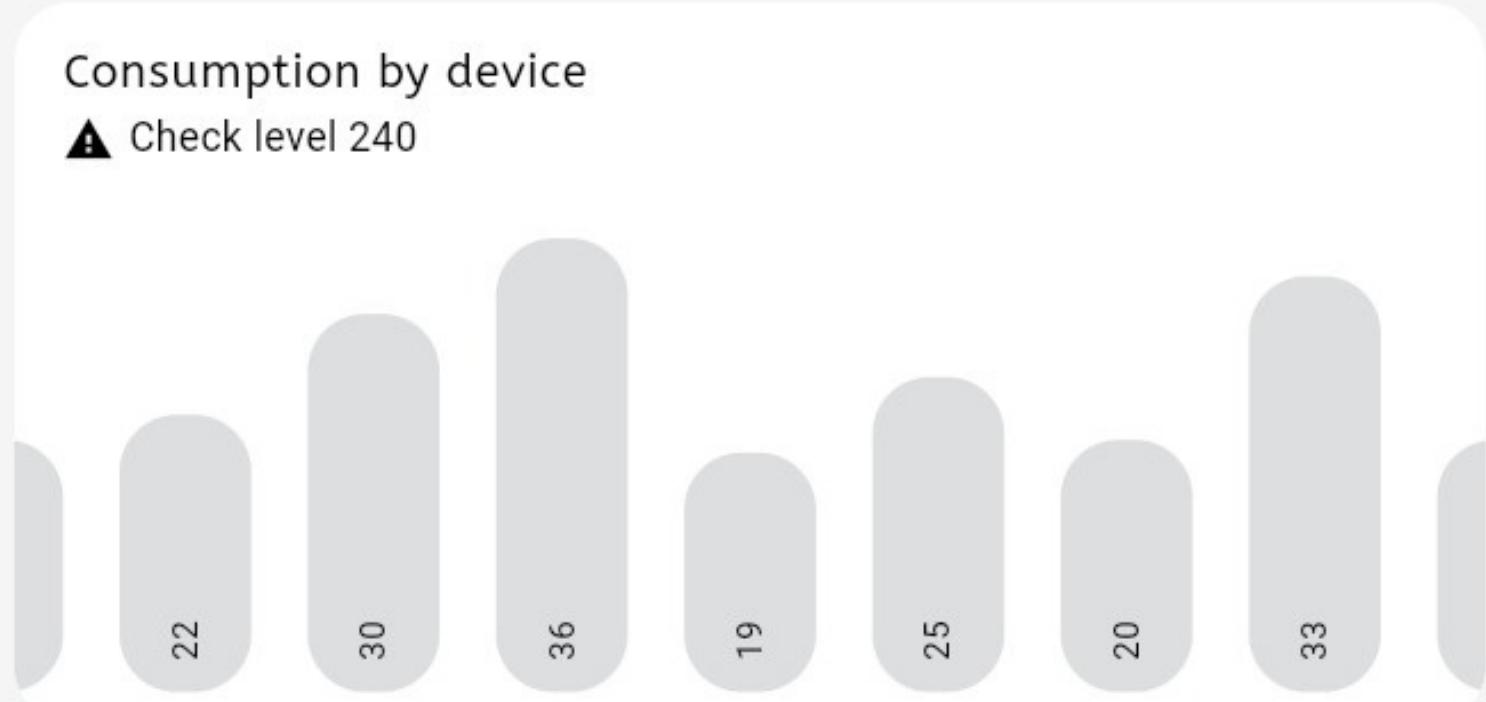
Electricity Usage

128



Consumption by device

▲ Check level 240



# STATISTICS

# LITERATURE SURVEY

1.

In 2015, Pavithra et al. implemented IoT for monitoring and controlling the appliances in a home via the Internet.

This made the system able to communicate with the available smart home system with an Internet gateway.

2.

In 2016, Ravi Kishore proposed a smart security and home automation system that utilized IoT.

It implemented TI CC3200 LaunchPad, Wi-Fi network processor and system that managed the power.

# LITERATURE SURVEY

3.

Vamsikrishna et al. (2017) designed the system that enables the user to control all the home appliances by smartphone and PC as long as it was connected to the Internet.

The system used Raspberry PI as it is able to interface with multiple sensors and providing connection to the Internet.

4.

Rakesh K. Deore (2015) developed an IoT based home appliances control using Bluetooth technology for home appliances control.

With the Bluetooth based system, the functionality of the system was highly restricted as the users needed to be in close range to the appliances to perform functions and control.

# REFERENCES

## REFERENCE 1

Ahmed ElShafee, Karim Alaa Hamed," Design and Implementation of a WiFi Based Home Automation System", International Journal of Computer, Electrical, Automation, Control and Information Engineering Vol: 6, No: 8, 2012.

## REFERENCE 2

R.Pivare, M.Tazil,"Bluetooth Based Home Automation System Using Cell Phone", 2011, IEEE 15th International Symposium on Consumer Electronics Singapore, pp.192- 195.

## REFERENCE 3

Kim Baraka, Marc Ghobril, Sami Malek, Rouwaida Kanj, Ayman Kayssi , "Smart Power Management System For Home Appliances And Wellness Based On Wireless Sensors Network And Mobile Technology", ,2015 XVIII AISEM Annual Conference, 978-1-4799- 8591-3/15©2015 IEEE

# CONCLUSION

In summary, the smart home automation project offers a transformative solution for modern living. By streamlining control over home devices and enhancing security and energy efficiency, we've empowered users with unprecedented convenience and peace of mind. With a commitment to continuous improvement and innovation, we're shaping a future where homes are smarter, safer, and more sustainable than ever before. Welcome to the future of living — welcome to our smart home automation solution.

# Progressive Web App

# PROBLEM STATEMENT

- Despite the widespread popularity of online shopping, the footwear industry still faces several challenges in providing a seamless and satisfying shopping experience for consumers. Traditional retail models often fail to adequately cater to the diverse preferences and needs of shoe enthusiasts.
- By identifying and addressing these challenges, the shoe-selling application aims to revolutionize the way consumers shop for footwear online, fostering customer loyalty, increasing sales conversions, and establishing itself as a trusted destination for shoe enthusiasts worldwide.

# IMPLEMENTATION

# Implementation of Sync and Push:

The image shows a web browser window with a website for "Footcap" featuring a "New Summer Shoes Collection". The browser's developer tools are open, specifically the Application tab under the Network panel. The Application tab displays information about service workers, storage, and background services.

**Service workers**

- Source: `serviceworker.js` (1)
- Received: 4/3/2024, 10:30:12 PM
- Status: #207 activated and is running (stop)
- Push: `{"method": "pushMessage", "message": "Welcome to Footcap!"}` (Push)
- Sync: `syncMessage` (Sync)
- Periodic Sync: `test-tag-from-devtools` (Periodic Sync)

**Storage**

- Local storage
- Session storage
- IndexedDB
- Web SQL
- Cookies
- Private state tokens
- Interest groups
- Shared storage
- Cache storage

**Background services**

- Back/Forward cache
- Background fetch
- Background sync
- Bounce tracking init

**Update Cycle**

- #207 Install
- #207 Wait
- #207 Activate

**Console**

```
1zy--11--> {type: 'commands', commands: Array(2)} 161
Sync successful
```

Default levels | 1 Issue | 1

main.js-9abbd3c6.cjs+482
serviceworker.js:61

# Implementing Lighthouse:

The website features a hero section with the text "New Summer Shoes Collection" and a large image of a blue and black running shoe. Below this are two main navigation sections: "MEN COLLECTIONS" and "WOMEN COLLECTIONS".

The Lighthouse audit interface shows the following scores: Performance (100), Accessibility (92), Best Practices (96), SEO (90), and PWA (Pass). A message indicates issues related to Chrome extensions affecting load performance.

There were issues affecting this run of Lighthouse:

- Chrome extensions negatively affected this page's load performance. Try auditing the page in Incognito mode or from a Chrome profile without extensions.

The audit summary shows a score of 100. The console tab lists the following errors:

Error	File
Business---1	main.ts-0abb13c6.js:593
DOWContentLoaded---1	main.ts-0abb13c6.js:593
result---app.message > {type: 'commands', commands: Array(2)} 212	main.ts-0abb13c6.js:592
onMessage-header--- > {type: 'commands', commands: Array(2)}	main.ts-0abb13c6.js:298
Izy---11- > {type: 'commands', commands: Array(2)} 161	main.ts-0abb13c6.js:487

# CONCLUSION

- The implementation of Progressive Web Application (PWA) technology has revolutionized the user experience of our shoe shopping application, marking a significant leap forward in the realm of digital commerce.
- Through seamless integration of PWA principles, we have successfully transformed our application into a versatile and accessible platform that combines the best features of web and native applications.

**THANKYOU**