LAB – 3 REPORT

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TOPIC:

Bus Stop Information Displays Fail to Provide Clear and Reliable Information to Commuters

Aim of the Experiment

The aim of this experiment is to apply the Design Sprint methodology (Empathize, Define, Ideate, Prototype, and Test) to design a user-centered solution that improves the clarity and reliability of bus stop information. The experiment focuses on understanding real commuter problems and validating a practical solution that provides accurate bus arrival information through digital displays.

Problem Context

Public bus transport is widely used by commuters of different age groups. However, many bus stops lack proper information displays or provide outdated and unclear information. The absence of real-time bus arrival timings makes commuters anxious, confused, and dependent on guessing or mobile applications. This problem is more severe for elderly commuters and occasional users, making bus stop information design a critical issue.

STEP 1: Empathize (Revisit & Deepen User Understanding)

Objective

To understand commuters' emotions, frustrations, behaviors, and needs while waiting at bus stops.

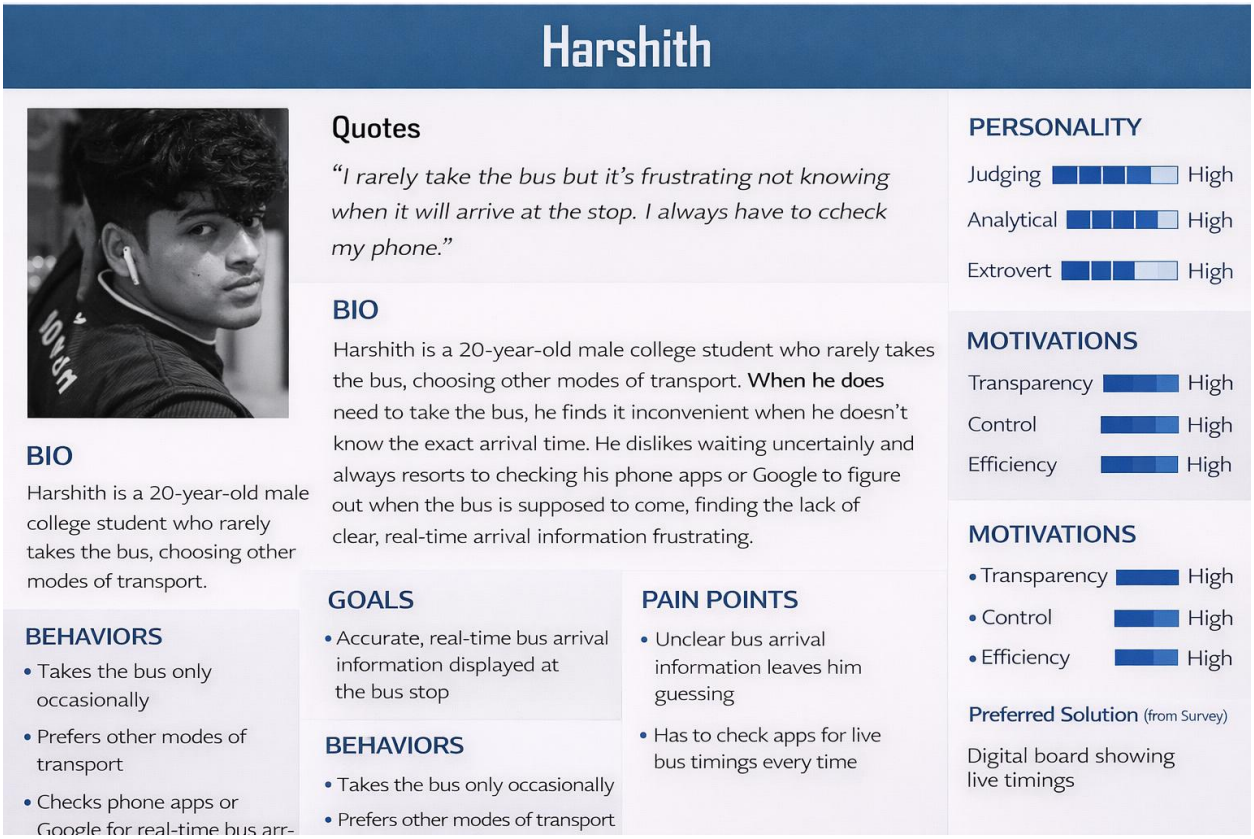
Activities Performed

- Studied survey responses from bus commuters
- Created personas based on real user data
- Developed empathy maps (Says, Thinks, Does, Feels)
- Identified common frustrations caused by missing bus timing information

User Personas Considered

Persona 1: Harshith (20, Male)

Rare bus user who finds route information clear but struggles with not knowing when the bus will arrive and depends on phone apps.



Persona 2: Mohan Lal (52, Male)

Daily bus commuter who faces major difficulty due to no information available at the bus stop and does not know bus numbers or routes.

Key Observations

- Most commuters do not know bus arrival timings
- Elderly users struggle more without digital information
- Younger users depend heavily on mobile apps
- Waiting without information causes stress and frustration

Refined User Insights

- Real-time bus timing information is the most critical need
- Static boards or guesswork reduce trust in public transport
- Clear digital displays can reduce anxiety and confusion

STEP 2: Define (Problem Statement & Design Challenge)

Problem Statement

Bus commuters need accurate and real-time bus arrival information because the absence of clear timing displays leads to confusion, stress, and unreliable travel.

How Might We (HMW) Question

How might we design a bus stop information system that clearly shows real-time bus arrival timings for commuters of all age groups?

STEP 3: Ideate (Idea Generation)

Brainstormed Ideas

- Digital boards showing real-time bus arrival timings
- Large-font displays for easy readability
- Simple and minimal layout
- Audio alerts for arrivals

Idea Selection

Selected Idea:

👉 **Digital Boards Showing Real-Time Bus Timings**

Justification

- Directly solves the main problem identified in the survey
- Helps both young and elderly commuters
- Reduces dependence on mobile phones
- Easy to understand and practical to implement

STEP 4: Prototype

Objective

To create a low-fidelity prototype of a digital bus stop display.

Prototype Description

The prototype is a **digital board installed at bus stops** that shows:

- Bus number
- Destination
- Live arrival time (minutes remaining)

Design Rationale

- Live timings reduce uncertainty
- Clear display improves commuter confidence
- Simple design supports all age groups

Prototype Type

Low-fidelity prototype (conceptual digital display)

STEP 5: Test (User Feedback & Validation)

Testing Method

- Explained the digital board concept to both personas
- Asked them to imagine using it during regular travel
- Collected feedback on usefulness and clarity

User Feedback Summary

User	What Worked	What Confused	Suggestions
Harshith (20)	Live bus timings	None	Improve accuracy
Mohan Lal (52)	Knowing which bus is coming	Language	Use simple text

Observations

- Reduced stress while waiting
- No need to guess or ask others
- Increased trust in bus service

STEP 6: Iterate & Reflect

Improvements Suggested

- Multilingual display options
- Audio announcements for elderly users
- High brightness for night visibility

Reflection

This experiment showed that the biggest problem at bus stops is not the availability of buses, but the lack of real-time information. Empathy mapping helped identify this issue clearly and guided the design of an effective solution.

Conclusion

The Design Sprint process successfully identified commuter problems and led to a practical solution. **Digital boards showing real-time bus timings** can significantly improve the public transport experience by reducing confusion, stress, and uncertainty. This experiment highlights the importance of user-centered design in improving everyday public services.