UNIVERSITY OF FRONTIER TECNOLOGY, BANGLADESH (UFTB)

LAB REPORT

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LAB REPORT STATUS

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HomelyBites

SoloByte

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Abstract

HomelyBites is an innovative cloud-based food delivery platform designed to empower housewives by enabling them to serve as cooks, manage their own menus, and earn income. Customers enjoy a seamless ordering experience with real-time tracking and personalized interactions, while delivery personnel ensure timely service. The platform promotes community-driven dining, offering fresh, homemade meals that combine convenience with authenticity.

Contents

1 Problem Analysis and Motivation

Modern lifestyles have increased the dependence on restaurant and fast food delivery, often at the cost of health, hygiene, and affordability. People struggle to find home-style meals that are both nutritious and reasonably priced. Meanwhile, many housewives with strong cooking skills remain confined to their households, lacking opportunities to showcase their talent or generate income despite their abilities.
This creates a two-sided gap:

- Customers are deprived of authentic home-made food options.
- Housewives lack accessible platforms to monetize their cooking skills and contribute financially to their households.

HomelyBites addresses this gap by empowering housewives to become home chefs and providing customers with affordable, healthy, home-style meals. This not only ensures convenient access to nutritious food, but also promotes women's economic empowerment and community well-being.

2 Literature Review

Online food delivery has grown rapidly due to mobile applications and cloud platforms, offering convenience over traditional dining. However, most services such as UberEats, DoorDash, and Foodpanda focus on restaurants rather than home cooks [1]. Health concerns further highlight the need for alternatives. Frequent fast-food consumption is associated with obesity and chronic diseases, while homemade meals are considered healthier, more hygienic, and culturally authentic [2].

From a socio-economic perspective, women's entrepreneurship positively impacts income, community development, and self-reliance [3]. Digital platforms also create new opportunities for women in micro-entrepreneurship.

3 Methodology

The development of HomelyBites followed six key phases:

- Requirement Analysis.
- System Design.
- Technology Stack.
- Implementation.
- Testing.
- Deployment and Maintenance.

A set of methods, practices, processes, techniques, procedures, and rules for ***HomelyBites***

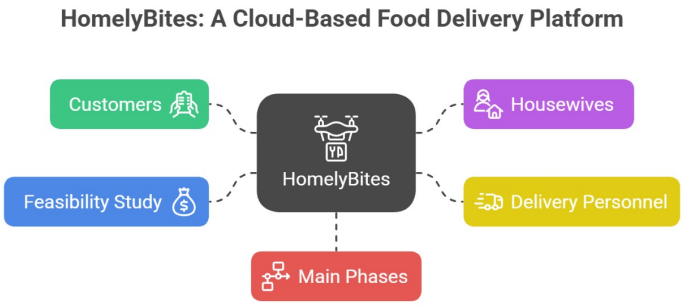

Figure 1: Block Diagram of **HomelyBites**

4 Feasibility Study

4.1 Technical Feasibility

The platform can be developed using widely available technologies such as React.js, Node.js, and cloud hosting services. Integration of secure payment gateways and GPS-based tracking is technically achievable with existing tools.

4.2 Economic Feasibility

Development and deployment costs are manageable, with potential revenue from service charges, delivery fees, and subscription models. Since housewives operate from home kitchens, infrastructure costs remain low, making the model cost effective.

4.3 Operational Feasibility

Housewives can easily manage menus and orders via a user-friendly interface, while customers benefit from convenient access to homemade food. Delivery personnel ensure smooth logistics, and the admin oversees operations, ensuring sustainability.

4.4 Social Feasibility

The platform promotes women's empowerment by enabling housewives to earn income and improves community well-being by providing healthier alternatives to home cooked food. This increases acceptance and long-term viability.

5 Main Phases

- Project proposal and planning.
- Requirement specification of the project.
- Selection of a suitable SDLC model.
- Developing a Data Flow Diagram (DFD).
- Developing a UML use case diagram.

- Developing UML sequence and communication diagrams.
- Developing a UML class diagram.
- System coding and implementation.
- Software testing and evaluation.
- Deployment with documentation.

SL	Task	Required Week	Responsible Person	Phase
1	Requirement Specification and Data Collection	1	Project Manager and Team Members	Research & Planning
2	Requirement Finalization	1	Project Manager and Team Members	Analysis
3	System Design and Modeling (DFD, UML Use Case)	1	Project Manager and Team Members	Design
4	UML Sequence, Communication, and Class Diagram	1	Project Manager and Team Members	Design
5	System Development (Coding)	5	Developers and Team Members	Implementation
6	Software Testing (Unit & System Testing)	2	QA Team and Developers	Testing
7	Beta Version Release for Feedback	1	Project Manager and Team Members	Testing
8	Feedback Review and Requirement Adjustment	1	Project Manager and Team Members	Testing
9	Final Delivery & Documentation	1	Project Manager and Team Members	Deployment

6 Work Plan

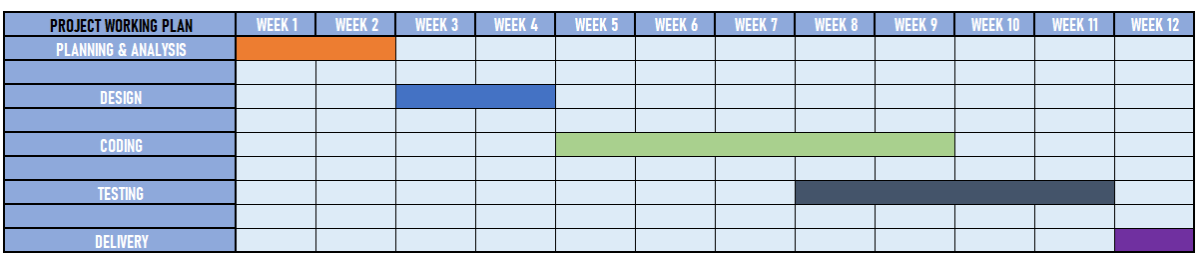

Figure 2: Chart of Project Timeline

7 Budget Details

SL	Item	Description	Estimated Cost (USD)
1	Requirement Analysis & Research	Surveys, interviews, documentation	500
2	System Design	DFD, UML diagrams, architecture design	700
3	Development (Frontend & Backend)	React.js, Node.js/Express, APIs	2,500
4	Database Setup	MySQL/MongoDB configuration	600
5	Cloud Hosting & Deployment	AWS/Google Cloud (1 year)	800
6	Payment Gateway Integration	Secure transactions (Stripe/SSLCommerz)	400
7	Mobile App Development (Optional)	Android/iOS cross-platform app	1,200
8	Testing & Quality Assurance	Unit, system, and user acceptance testing	500
9	Project Management & Documentation	Reports, scheduling, coordination	300
10	Maintenance & Updates (1 year)	Bug fixes, feature enhancements	700
		Total Estimated Budget	**8,200**

Table 2: Estimated Budget for HomelyBites

8 Conclusion

HomelyBites has been designed as an innovative cloud-based platform to connect housewives with customers seeking affordable, healthy, and home-made meals. The system addresses a two-sided gap: customers often lack access to nutritious home-style food, while housewives have limited opportunities to monetize their cooking skills. Through structured development phases, modern technologies, and a sustainable business model, *HomelyBites* ensures scalability, usability, and reliability.

The platform not only provides convenience and healthier food choices to customers but also contributes to women's economic empowerment and community well-being. With proper implementation, testing, and continuous improvement, *HomelyBites* has the potential to become a successful model for home-based food delivery services in Bangladesh and beyond.

9 References

References

[1] A. Khan and M. Alam, "Growth of online food delivery industry and its impact on restaurant business," *Int. J. Innov. Technol. Explor. Eng.*, vol. 9, no. 1, pp. 660–664, Nov. 2023.

[2] M. Goswami, "Homemade food versus restaurant food: A consumer perspective," *J. Foodservice Bus. Res.*, vol. 24, no. 2, pp. 185–197, Apr. 2024.

[3] World Bank, *Women Entrepreneurs: Key to Inclusive Growth*. Washington, DC: The World Bank Group, 2022.

PROJECT WORKS	MIZAN	ROJONY	REDOAN
PROJECT IDEA	☐	☑	☑
DOCUMENTATION	☑	☑	☑
DIAGRAME / FIGURE	☑	☐	☑
REFERENCES	☑	☑	☑

Figure 3: Work Contributions