

# Skip The Bins

## Group 14

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# Background

Waste is a major global issue causing an imbalance in our ecosystem. For a long time, the garbage that humans produce has been harmful to our environment. Humans produce far too much junk and cannot dispose of it sustainably. Our oceans and landfills are overflowing with waste that isn't biodegradable or can't be recycled adequately. Recycling is the process of dismantling and repurposing materials that would otherwise be discarded. People are increasingly worried about trash generation and its consequences, but they lack awareness and motivation. With our SkipTheBins, we provide a solution to this problem that is beneficial to our ecosystem and the people. SkipTheBins creates a central channel between organizations that act as waste collectors and the public, waste depositors. We motivate our users to recycle waste regularly by offering exciting rewards in different vouchers.

# Purpose

SkipTheBins provides a user-friendly web application and a platform between waste collection vendors and end-users to have a modern waste management system. The user can submit their recyclable waste for recycling by scheduling a waste pickup from different vendors who collect and recycle the waste. To motivate the user to contribute to the environment, we introduce rewards for each waste pickup scheduled. This will help us reduce the environmental pollution caused by improper waste management. By proper recycling, we can conserve our natural resources, which would reduce the need to harvest new materials from nature.

# Objectives

We aim at providing the solution to regulate the waste management process to reduce carbon footprint. Our web application would be easy to use and medium between waste depositors and collectors. It would support features like custom waste pick-up scheduling as per user availability and reward them with points that can be redeemed to get vouchers. We want to generate awareness among people for environmental issues arising due to not recycling the waste.

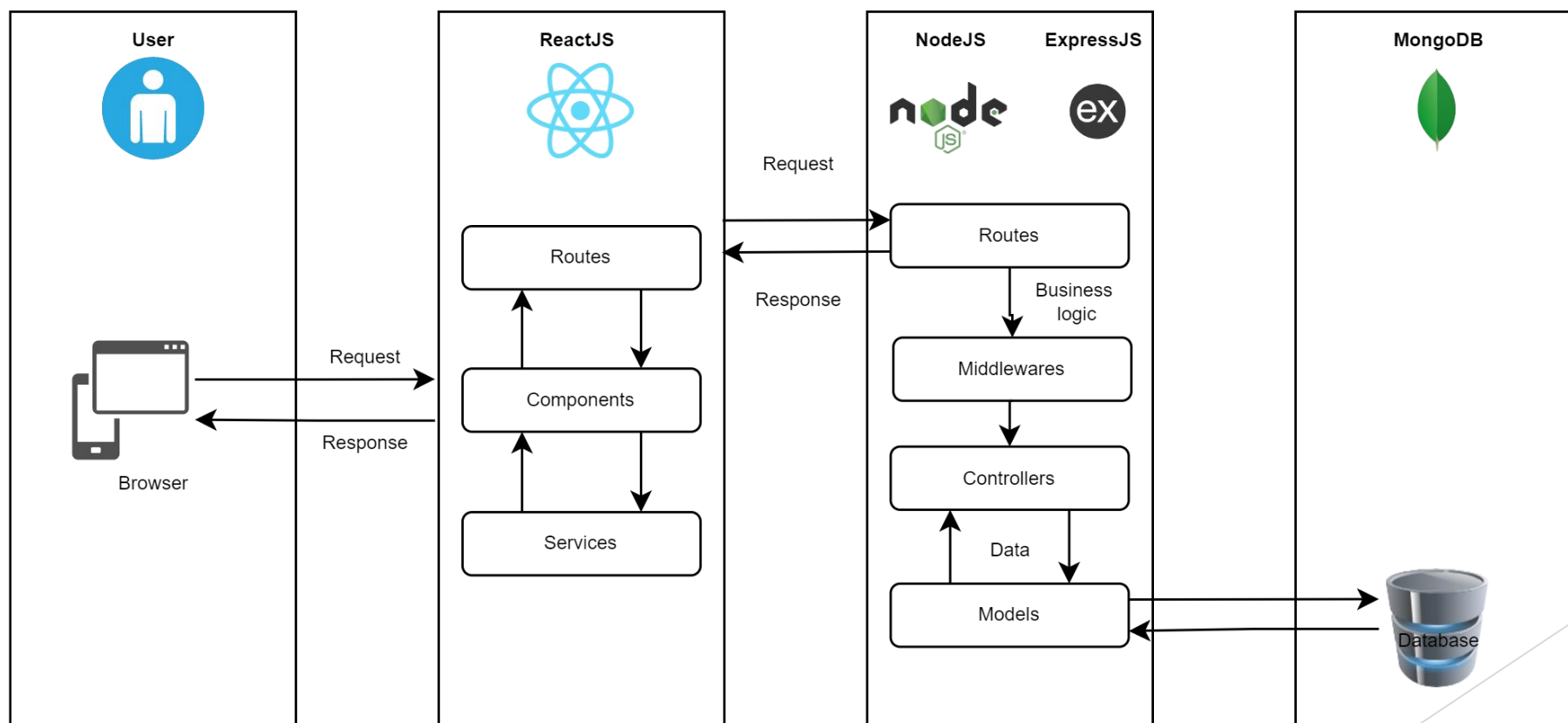
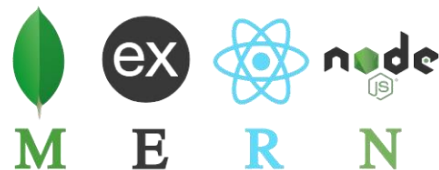
# Goals

1. To create a web application to regulate the waste management process.
2. To find a profitable way of better waste management to contribute to the environment.
3. To provide a user-friendly platform where users and vendors can interact with this application.
4. Through this platform, the users can give away their recyclable garbage and, in return, reward points that they can spend in the reward store.
5. To create an interactive application leveraging the concepts of modern web development.
6. To deliver a valuable product for society and be profitable for all its stakeholders by creating this application.

# Technology

1. **MongoDB** - For Database
2. **Express** - Web Backend framework for NodeJS
3. **ReactJS** - Web Frontend Library
4. **NodeJS** - JS Runtime
5. **Bootstrap** - For designing
6. **Heroku** - For deployment

# Architecture



# Costing

The variable cost will include investment in the :

- Marketing(Google Ads ( ~1-dollar PPC), LinkedIn advertising (~6.59 per 1k impressions),
- Designing and developing the application and its maintenance cost will be approx. 300 CAD.

The fixed costs will include:

- Payroll: 16K per month ( 20 CAD per hour to 5 members),
- Heroku paid dyno (type: performance-m) is expected to be ~\$250 per month
- MongoDB dedicated plan \$57 per month.
- Vulnerability assessment via CoderByte \$199 per month.



# Deployed Application

Frontend: <https://skipthebins.herokuapp.com/>

Backend: <https://skip-the-bins-backend.herokuapp.com/>

# Any questions?

