Online Kabadiwala - A E-commerce Platform for Scrap Collection System.

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ABSTRACT

Every day, we hear about the dangers that improper garbage disposal brings to the environment. Since most of the material that ends up in our landfills is still not segregated, it appears that there is no end in sight to the conflict. Reusing and upcycling are strangely enough not to be hip new ideas in India. We all grew up with the custom of The Recycler man, who would visit our homes and gather our carefully sorted newspapers, glass bottles, and various other disposable household items. Sadly, the system has all but collapsed with the rise of urban life and hipster apartment buildings. Online Kabaddiwala is an Android and web-based online platform offering free door-to-door recycling and scrap collection services. Online recycling is done by kabadiwala.

Keywords –
App-based interface,
door-to-door collection system,
and
scrap management

INTRODUCTION

The service industry is the largest and fastest growing sector of the Indian economy, attracting foreign investment and providing vast employment opportunities [1]. Electronic commerce, also known as e-commerce, is the buying and selling of goods and services over electronic networks, primarily the Internet. As the economy continues to boom and customers' lifestyles evolve, the demand for online delivery services is increasing.Services include transportation, restaurants, tourism, finance, real estate, business, social and personal services. Third-party people, processes, and physical evidence are an important part of the service industry, and people working in this field are professionally employed to perform their jobs [2]. Customer expectations and satisfaction are very important to service quality and satisfaction. Home-based services are becoming more and more popular due to various factors such as timeliness, service quality and more, and there are many companies offering home-based services [3].Our study investigates how the quality of online kabaddiwala services in Hyderabad affects customer satisfaction.
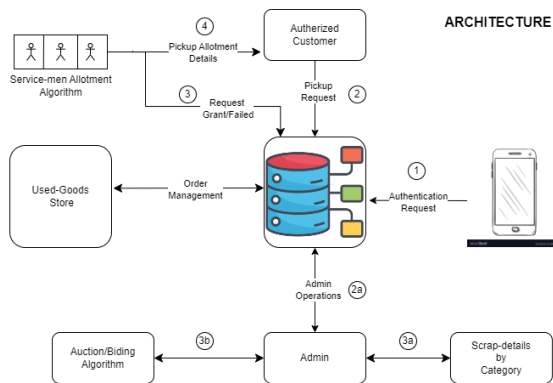
About Online Kabadiwala

Simply segregating waste into dry and wet categories is not sufficient. There are various other types of waste that require separate categorization. Certain waste items such as e-waste, plastic waste, and broken furniture cannot and should not be disposed of in regular dustbins. Instead, they should be sent to junkyards or given to large industries for recycling [4]. In India, it is common for households to rely on a middleman, known as a "kabadiwala-wala," who collects the waste from our homes and processes it further. However, this system poses several challenges. Firstly, we cannot schedule a specific time for the collection, as we have to wait for the middleman to arrive. This lack of prior notice leaves us unprepared. Additionally, the middleman's cart has limited capacity, making it impossible for every household in the community to provide their waste to him. Furthermore, it is impossible to determine whether the individual is offering us a fair price for our waste. Only the older members of our household possess knowledge of the accurate prices. Our application is designed to address the challenges in this field [5]. The online-kabadiwala adheres to the conventional approach and compensates for scrap based on its weight. The objective of the online-kabadiwala is to streamline the network of waste collection vendors. By leveraging technology, the online-kabadiwala brings transparency to the long-standing practices of waste paper collection. The entire waste collection process is facilitated by the utilization of technology by the online-kabadiwala. Also, we provide an integrated store in which customers can buy ***'used goods'***.[6] The customers can search for the desired product, make changes to the wain, remove the products from the wain and go in the store. The customers can update their information like name, address, and other diverse data.

Statement of the Problem

When everything is online, we are still waiting for scrappers to pick up scrap & that too with their convenience. Customer can't schedule the pickup, uncertainty in pricing & weighing, and management of collected scrap. Idea is to provide doorstep pickup service where customers can schedule doorstep pickup for their scraps. "Waste for one could be utility for the other", Used-goods store to buy vehicle spare parts, antique products, & old working mechanical parts. Enabling users to scan an item, getting a prediction of its biodegradability [7].
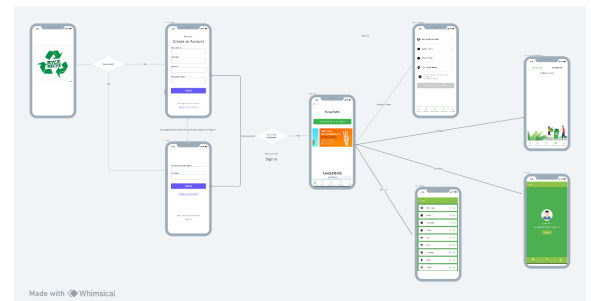
Objectives of the Study

Understand the demographics of customers using online Kabadiwala services.

To assess the awareness level of respondents regarding online kabadiwala services.

Analyze the impact of online kabadiwala service quality on customers, taking into account their demographic profile.
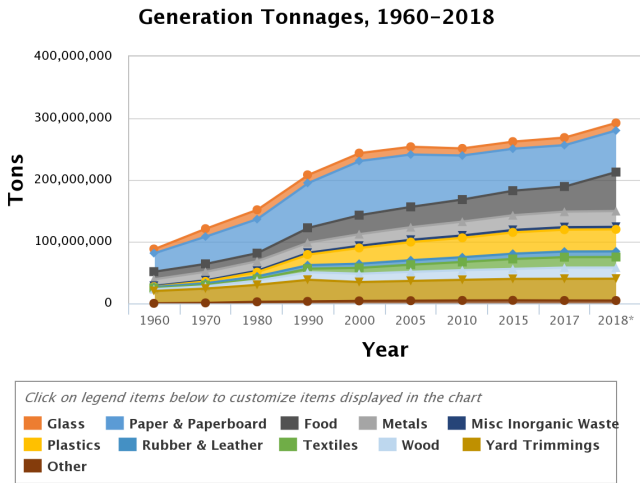
Suggested improvements to improve services and their quality in the online kabadiwala industry.

GENERAL ARCHITECTURE AND FLOW CHART

Online Kabadiwala's online platform provides a convenient and eco-friendly scrap collection and recycling service that includes three modules: Admin, Scrap Collector, and User or Customer. The scrap collector module revolutionizes the

conventional approach to waste paper collection by introducing transparency. Our primary focus at Scrapyard is customer satisfaction, and we achieve this by offering competitive pricing, precise weight measurement, and a guarantee of 100% recycling of the scrap material provided by our clients.

Figure 1: High level design of Online Kabadiwala App.

Figure 2 : App Screen layout of Online Kabadiwala Application.

EXPERIMENTAL RESULT ANALYSIS

Figure 3: a plot of different type of recyclable waste generation between 1960 and 2018.

Figure 4: Categorically percentage wise scrap generationof year 2018.

In 2018, the disposal of municipal solid waste (MSW) in landfills reached approximately 146.1 million tons [8]. Food waste accounted for the largest portion at around 24%, followed closely by low-density plastics-polymers at over 18% [9], and paper and paperboard at about 12%. Rubbers, leathers, and textiles collectively represented over 11% of the waste[10]. The remaining materials each made up less than 10% [11].

The increase in solid waste can be attributed to the growth of the economy and rapid industrialization. However, the government faces challenges in implementing effective waste policies and providing viable waste management options. [12]

Currently, there is a lack of a proper framework for managing metal waste. This deficiency in waste management infrastructure leads to the disposal of recyclable materials worth approximately USD 11.4 billion annually in India [13]. As a result, the absence of adequate regulations and frameworks is expected to hinder the market's growth.

	1960	1970	1980	1990	2000	2005	2010	2015	2017	2018
Paper and Paperboard	17%	15%	21%	28%	43%	50%	63%	67%	66%	68%
Glass	2%	1%	5%	20%	23%	21%	27%	28%	25%	25%
Plastics	Neg.	Neg.	<1%	2%	6%	6%	8%	9%	9%	9%
Yard Trimmings	Neg.	Neg.	Neg.	12%	52%	62%	58%	61%	69%	63%
Lead-acid Batteries	Neg.	76%	70%	97%	93%	96%	99%	99%	99%	99%

Table 1: **Tabulated data of waste/scrap recycled between year 1960-2018.**
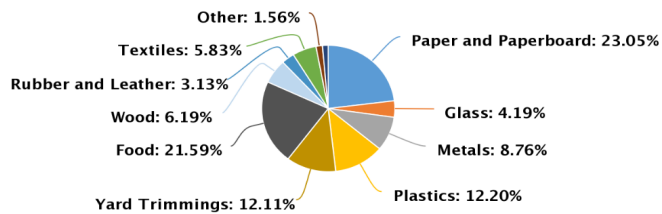
FUTURE SCOPE

The Application aims to offer a user-friendly interface, ensuring convenience for all users. In the future, it plans to expand its coverage to include a wide range of cities, villages, and towns, allowing users to easily book a Recycler guy online with just a few clicks. The application will provide up-to-date rates for different types of scraps, based on the Scrap Markets in the respective area. To ensure transparency, receipts will be issued to confirm the exchange of scrap between the Recycle Guy and the User. Additionally, users will have the option to select the type of scrap they wish to recycle, whether it be paper scrap, old bottles, broken furniture, or any other form of E-waste. The efficient management of scrap is of utmost importance to us.

CONCLUSION

This innovative Online Kabadiwala Web Application is set to revolutionize the scrap management industry. It offers a convenient solution for individuals to dispose of their old scrap items. Whether it's furniture, air conditioners, televisions, or refrigerators, users can easily book a recycling professional through the internet at any time. The application provides transparent pricing for different types of scrap, ensuring users are aware of the ongoing rates. To ensure security and prevent scams, receipts will be provided for every transaction, and recycling professionals will be required to register and verify their identity. Just like how booking applications for food delivery, order pickups, and cab services have enhanced convenience in our lives, this application is poised to bring about a significant lifestyle change.

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