

A Social Platform that Facilitates the Movement, Recycling, and Disposal of Electronic Gadgets and Other Forms of Technological Waste

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Abstract - The website aids the user in the process of gathering used or damaged devices for the purpose of repurposing them into new products or disposing of them in an environmentally safe and innocuous manner. Where three services—recycling, disposal, and moving—are accessible on the premises. The website is dedicated to electronic devices, including notebooks, smartwatches, computers, phones, and tablets. The website facilitates direct payment via the user's bank card number subsequent to the service selection process. Additionally, the website ensures the user's security by enabling them to input their private information in a confidential manner, protected by a password.

Keywords: Social Platform, Movement, Recycling, Disposal of Electronic Gadgets, Technological Waste.

I. INTRODUCTION

The website is highly successful in resolving issues that are associated with electronic devices that the user is experiencing. For instance, the user may acquire a variety of electronic devices during a period of time that is not being used, and the user may have two separate issues. The first difficulty is how he can get rid of broken gadgets, and the second problem is devices that the user does not want to use again. The website assists the user in getting rid of these devices in a secure manner that does not do any harm to the environment via the disposal of these devices. Another concern is the accumulation of gadgets, which is tough to get rid of since it is difficult to get rid of them without any advantage. Through the usage of this website, the user is able to recycle or reuse the items.

In order to relocate, recycle, and dispose of electronic devices in a secure manner, the project that is being presented is a web application that would gather electronic gadgets from their owners in all governorates of the Sultanate of Oman. In accordance with the governorate, the application will make it possible for clients to showcase electronic items depending on

enterprises that have registered on the online site. Customers will get acquainted with you in a manner via the use of web applications and the availability of firms through the facilitation of contact with the entities involved. All different kinds of electronic devices will be supported by the online application. Payments may be made either online or in cash upon delivery, and billing is possible for all of the services that are offered via the web application. In order to cater to people of all nationalities in the Sultanate of Oman, this website is accessible to people of all ages and is available in both Arabic and English. Every part of the Sultanate has access to the website, which can be accessed over the Internet and may be accessed on any electronic device. On this website, free registration is available to any and all businesses who are interested in using it. Consumers from any part of the Sultanate may use this website, which can handle an endless number of different consumers.

Our project has achieved numerous successful objectives, which are summed up in the repurposing of obsolete electronic devices and the environmentally friendly disposal of damaged devices. The application is user-friendly and offers comprehensive client services, including recycling, relocating, and disposal, in collaboration with the registered companies. Facilitate client-business communication by ascertaining the customer's electronic and conservative device requirements and recommending Oman-accredited standard companies. This application is unique in that it is bilingual, and it is the only application that focuses on electronic devices; no other website exists that facilitates the recycling, transferring, or disposal of electronic devices.

This endeavor centers on the creation of a website application that enables users to register and donate or transport non-functioning or unused electronic items for recycling, donation, or disposal. Interested individuals or organizations may reach out to the individuals or organizations offering these electronic items for retrieval. This website contains electronic devices of every variety. The consumer is permitted to select or utilize multiple services

concurrently, with the cost indicated in Omani riyals. Additionally, direct electronic payment for each service is accepted. By enabling the search function to retrieve pre-registered devices and all associated information. A service on the website is compatible with an unrestricted quantity of electronic devices. A customer may conduct a data search for organizations that have registered on the website.

II. RELATED LITERATURE

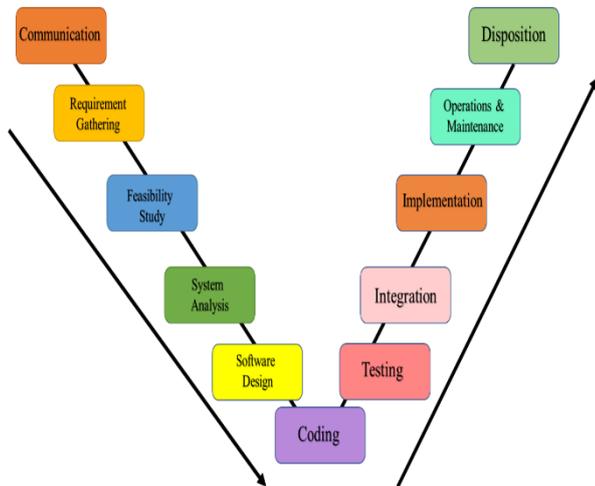
In a nation with a high population density like India, the fast development of electronic trash has become an issue in terms of the performance of the environment. At the ground level, it is very necessary to strictly follow laws and regulations in order to ensure efficient treatment of electronic trash. In this particular scenario, the Ministry of Environment, Forest, and Climate Change in India has implemented the specific laws and regulations known as "E-waste (Management and Handling), May 2011" (Central Pollution Control Board, 2011). These regulations are founded on the concept of extended producer responsibility (EPR) (Suja et al., 2014). After that, the most current "E-waste (Management) Rules, 2016" have been in effect from October 1, 2016 (Central Pollution Control Board, 2016). This is a significant development. It was previously recommended by Akenji et al. (2011) that the EPR system required a sophisticated infrastructure as well as efficient regulatory enforcement. Its provides a concise summary of the handling of electronic trash in India, as well as in other nations which include the United States of America and the European Union. Furthermore, Khetriwal et al. (2009) had previously highlighted that EPR need to be utilized in a robust approach in order for it to be beneficial for boosting the applicability with modern technology such as that which is found in Switzerland. In the formal e-waste industry, therefore, appropriate solutions for e-waste treatment may be found in the form of updated regulations, qualified labor, improved technology, and enhanced finance. Until then, customers should be informed about the need of sending their electronic trash to the official sector and should be encouraged to do so. For instance, in developed nations, where the introduction of innovative and sophisticated recycling equipment for electronic trash has resulted in increased rates of collection and recycling (Table 1), the rate of recycling has increased. In the past, the "E-waste(Management & Handling) Rules, 2011" in India concentrate only on EPR and do not take into account the collection rate. In light of this, the adoption of the policies of other nations, such as the European Union and the United States, is not essential to achieving success in resolving this issue. This is due to the fact that every nation's circumstances are unique. India has a significant challenge in the form of the implementation of the most recent "E-waste (Management) Rule, 2016." When it comes to the management of electronic

trash, Zeng et al. (2015) argued that the incorporation of mobile recycling facilities is an effective method for resolving the issue of electronic waste, and that this technique will be included as a substantial contribution to the mitigation of global environmental issues.

Consequently, according to Wan et al. (2012), a viable option for an effective solution to the issue of electronic waste might be a mix of pre-processing technology with the environmental and health prospects at the local level, as well as high-standard end processing. Borthakur and Govind (2017), Dwivedy et al. (2015), Manomaivibool (2009), and Wath et al. (2010) are only few of the writers who have contributed to the investigation of the environmental problems that are confronting the community in India. We have taken into consideration the concerns of these authors. Therefore, we feel that further focus should be devoted to the development of suitable methods to ameliorate the challenges that India is experiencing with electronic waste.

Recycling of electronic trash According to the findings of MAIT-GTZ (2007), only a tiny percentage of electronic trash (five percent) is collected by official recyclers, while the remaining ninety-five percent is handled by the informal sector. Additionally, as a result of an increase in the cost of metals, recycling electronic trash has evolved into a viable alternative for making a living in the unregulated sector. After electronic trash has been gathered from its place of origin, it is often moved to a family workshop for the purposes of sorting, physical disassembly or informal recycling, and even the resale of various elements that may be reused (Dwivedy and Mittal, 2012; Wath et al., 2010, 2011). According to Luo et al. (2007), the material that represents leftovers that cannot be used is often disposed of on open land, which is detrimental to the environment. The informal sector is a complex channel, and because of their high penetration ability at the community level, they are providing more convincing services to consumers than the formal sector for the collection of electronic waste (Awasthi et al., 2016). For instance, the electronic waste that is collected from a consumer by an informal sector worker is then handed over to a dealer or larger trader who further processes it, such as segregating the various components these workers in the informal sector use crude ways to remove useful items, such as metals, from electronic debris. After that, they dispose of all of the materials that are left over on open land (Awasthi et al., 2016b; Wath et al., 2010). In this context, the life cycle assessment is an important pathway for estimating the flow of electronic products in connection to the effect they have on the environment at various stages (Yellishetty et al., 2011).

III. ANALYSIS & METHODOLOGY



The user communicates with the company during this phase to clarify the problem and provide more details about his needs or goals. Inquiring about the various services provided by the organization, along with pricing and other pertinent details, he gets in touch with them.

The software development team is now striving to carry out the project. In order to get more information, compile data, and understand the particular user needs, they are speaking with the different stakeholders. User interviews, questioning stakeholders on a range of topics to elicit answers, and, if available, database consultations are the methods used to gather requirements.

This phase won't happen until all the conditions have been met. A draft plan is provided by the team. This plan provides a basic idea of what has to be done in the software, what the customer can accomplish, and what kind of project the team can provide to the client; it is not a full plan. The team is analyzing the application to see whether it can be developed for the customer and if it can meet every user expectation. Using a number of instruments known as algorithms, the developers may conclude the feasibility study. These algorithms decide whether the project should be completed or not.

During this phase, the software development team will procure and develop a software module. This module will provide the group an overview of the whole strategy and a sense of what the team needs to achieve. The team will make an effort to comprehend the program's or project's restrictions, which might include those related to cost, time, and system, if you present it to the user. They will next make an effort to comprehend the issue and modifications made to the current system. Lastly, they will decide how the project will improve the users' ability to do their jobs more successfully and

whether or not the application should be supplied to them. The project team will analyze the project scope and then finalize the plans (project plan), schedule, and resources based on the results.

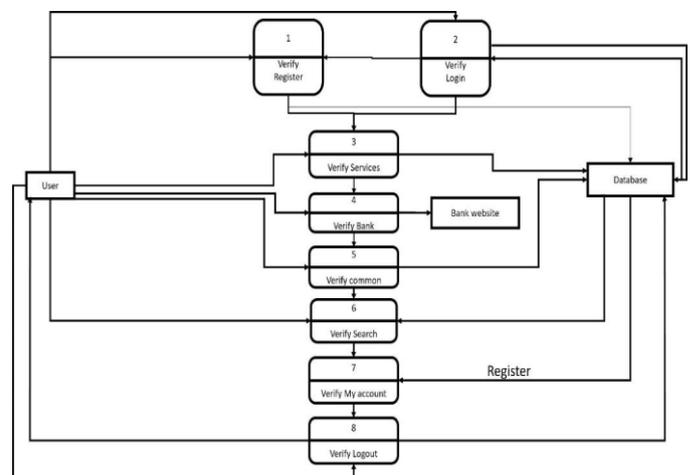
After the project plan is completed, we go to this step of the process, where we must produce two types of designs: logical and physical. User feedback and the data acquired throughout the requirement-collection phase are used to finish the design. We create the design of the program or system based on this data.

IV. ANALYSIS AND PROJECT DESIGN

Company_registration		
Username	Varchar(30)	Pk
Name	Varchar(30)	
Address	Varchar(30)	
Code	Varchar(20)	
Services	Varchar(30)	
PhoneNo	Varchar(8)	
Password	Varchar(20)	
Account	Varchar(30)	
E-mail	Varchar(30)	
Governorates	Varchar(30)	

Booking		
Transaction_Number	Int(30)	Pk
Type_Service	Varchar(30)	
Number_of_Devices	Int(30)	
Governorates	Varchar(30)	
Date	date	
Total_Price	Int(30)	

Data Flow Diagram



V. DATA NORMALIZATION

Admin_registration

Frist_Name	Last_Name	Username	Password	Account_Number	Phone_Number	E-mail	Governorates	Date_of_Birth
Ahoud	Nadhairia	ahoud	012345	ahoud12345	98765432	ahoud@gmail.com	Sharqia	2022-04-28
Buthaina	BanyOraba	buthaina	buthaina123	021548796	98745120	buthaina@gmail.com	Sinaw	2022-04-12
Shaima	Rashdi	shaima369	sh9510	025864528	98712305	shaima@gmail.com	WADI BANI KHALID	2022-04-02
Teef	Rashdi	teef	teef789	02587496	98745120	teef@gmail.com	Sinaw	2022-04-24

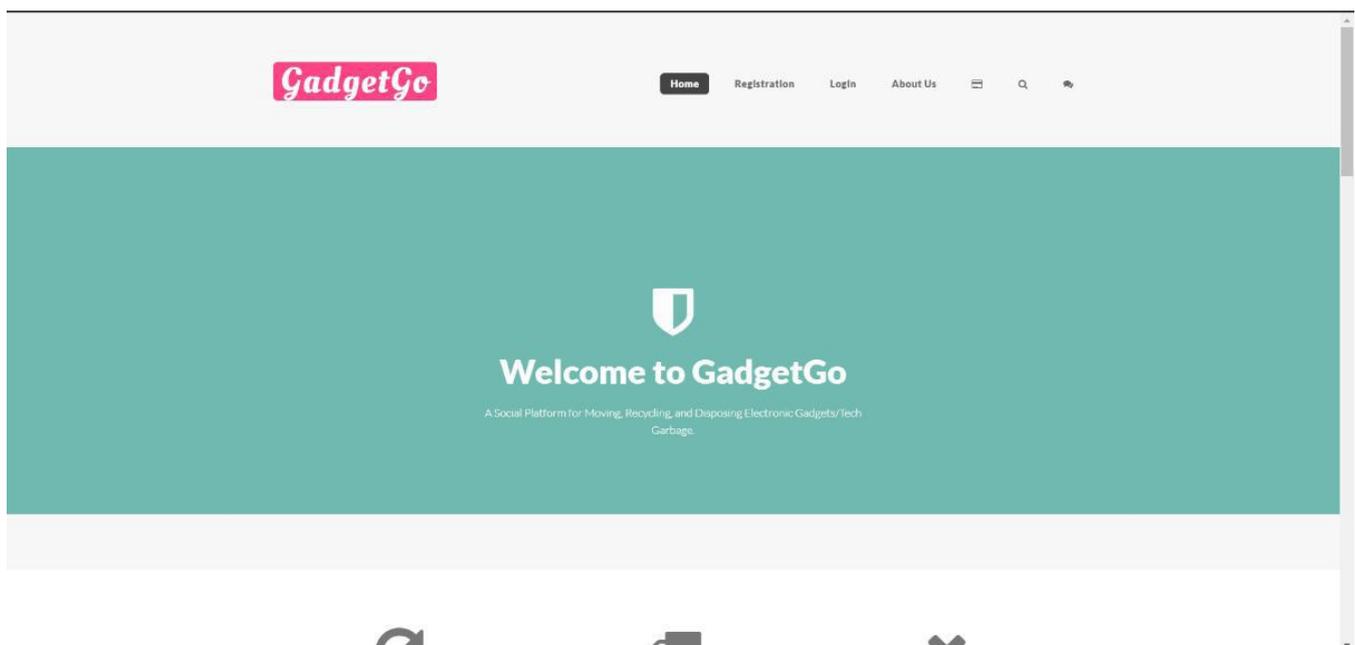
Company_registration

Name	Address	Username	Code	Services	PhoneNo	Password	Account	E-mail	Governorates
ABC	abc123	abc1245	147852	Recycling	12457803	123	abc123	abc@gmail.com	Muscat
Beah	07714583	beah	1478	Moving	25896301	4170	07714583	beah@gmail.com	Sur
haya	haya789	haya0159	325874	Disposing	12457803	0159852	haya789	haya@gmail.com	Sur
Nadeem	0258741369	nadeem	014785	Disposing	02358947	nadeem10	0258741369	nadeem@gmail.com	Muscat

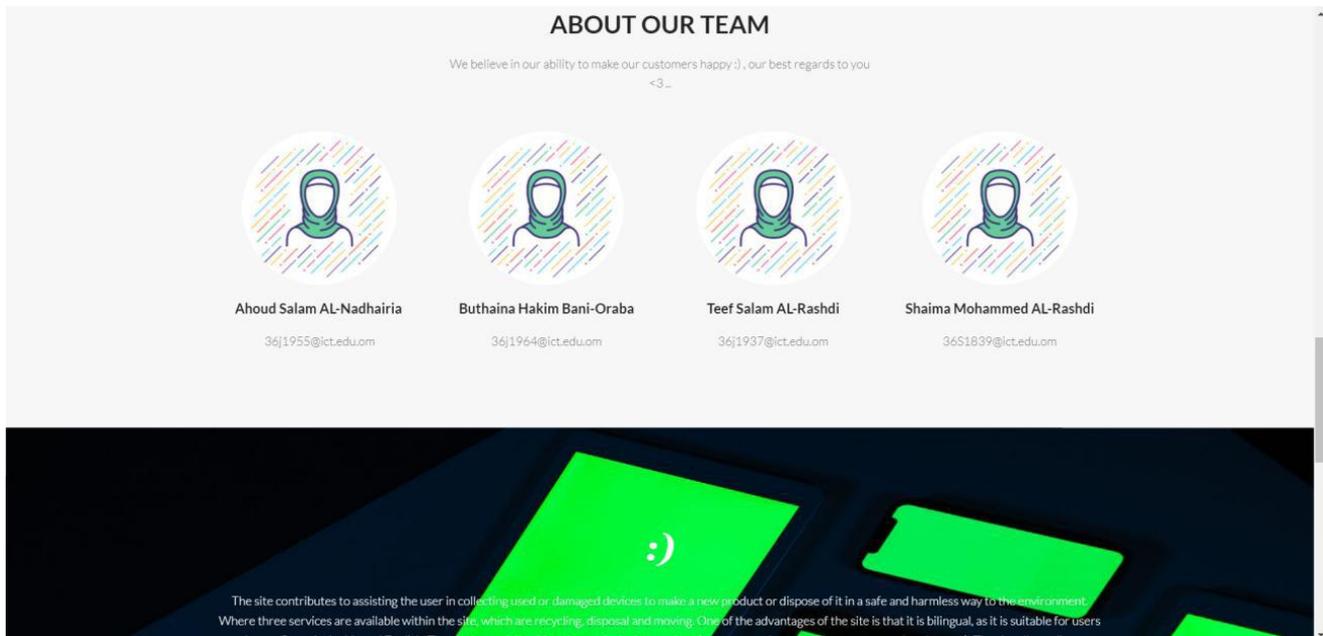
Booking

Type_Service	Transaction_Number	Number_of_Devices	Governorates	Date	Total_Price
Recycling	1	2	Muscat	2022-05-06	20
Moving	2	4	Buraymi	2022-04-25	40
Disposing	3	1	Wusta	2022-05-03	10

System Design 1



System Design 2



VI. DESCRIBING A WEBSITE

It seems that you are describing a website or platform that specializes in the recycling and disposal of electronic gadgets. This website or platform provides consumers with the ease of reusing or securely disposing of their broken or old electronics while also ensuring that the environment is preserved. On the basis of your description, the following is a rundown of the most important features and services:

Services That Are Available:

Recycling: The platform makes it easier to recycle unwanted electronic devices such as laptops, smartwatches, computers, phones, and tablets since it promotes recycling. Refurbishing, rescuing pieces, or recycling in an ecologically conscious manner might be some of the options available here.

Disposal: equipment that cannot be recycled or refurbished are given with appropriate disposal techniques, which ensures that they are disposed of in a way that is both responsible and safe for the environment.

Moving Services: It would seem that the platform may provide help or services for physically carrying the gadgets to the place that is designated for recycling or destruction.

Dedication to Electronic Devices: The website is designated only for electronic devices, taking into account the diverse assortment of electronic gadgets that users may choose to discard or get rid of.

Direct Payment: The platform enables users to make payments directly via the website. This is the first step in the payment process. In order to finish the transaction, it is possible that you will need to provide the data of your bank card.

Security Measures: a. **Confidential Information Protection:** The website guarantees the security and confidentiality of user information, particularly sensitive data like bank card numbers, by enabling users to submit this information securely.

Protection with a Password: Users are forced to use a password in order to access and enter their sensitive information. This increases the level of security and prevents unwanted access.

It would seem that this platform offers a complete solution that caters to people or organizations that are interested in recycling or disposing of electronic gadgets. The platform places an emphasis on ease, security, and environmental responsibility.

It is quite probable that the success of such a website or platform would be contingent upon the implementation of stringent safety precautions, user interfaces that are simple to traverse, service descriptions that are unambiguous, and pricing policies that are open and honest.

Sample code:**Admin Login**

```
<?php
include"header.php";
$error=0;
$username=$_POST["username"];
$password=$_POST["password"];
if($error == 0)
{
    //session_start();
    $sql="select * from admin_registration where Username='$username' and Password='$password'";
    //echo $sql;
    $dbconnect = mysqli_connect("localhost", "root", "") or die("Unabel to connect".mysql_error());
    $db = mysqli_select_db($dbconnect,"GadgetGo");
    if (isset($_POST['lo']))
    {
        if ($db)
        {
            $myquery = mysqli_query($dbconnect,$sql);
            if(mysqli_num_rows($myquery)>0){
                $_SESSION["Name"] = $username;
                header("location:index.php");
            }else{
                echo "Your user name or passwred incorrect";
            }
        }
    }
}
?>
```

```
<body link="black" vlink="gray" alink="orange">
<center><a href="userLogin.php" target="right" ><i class="fa fa-angellist"></i>Back To Login</a></center>
</body>
<?php
include"footer.php";
?>
```

VII. CONCLUSION

In order to create a new product or properly dispose of broken or obsolete electronics, the website helps users gather them and helps the environment. where the three services of recycling, disposal, and transportation are offered on the property. Being multilingual and appropriate for users who speak Arabic and English well is one of the site's benefits. With regard to electronic devices, the website is specialized (computers, phones, tablets, smartwatches, laptops). Upon choosing the desired service, the customer may make a direct payment using their bank card information on the website. By enabling users to submit their personal information in a secure manner and with a password, the website also offers protection for its users.

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