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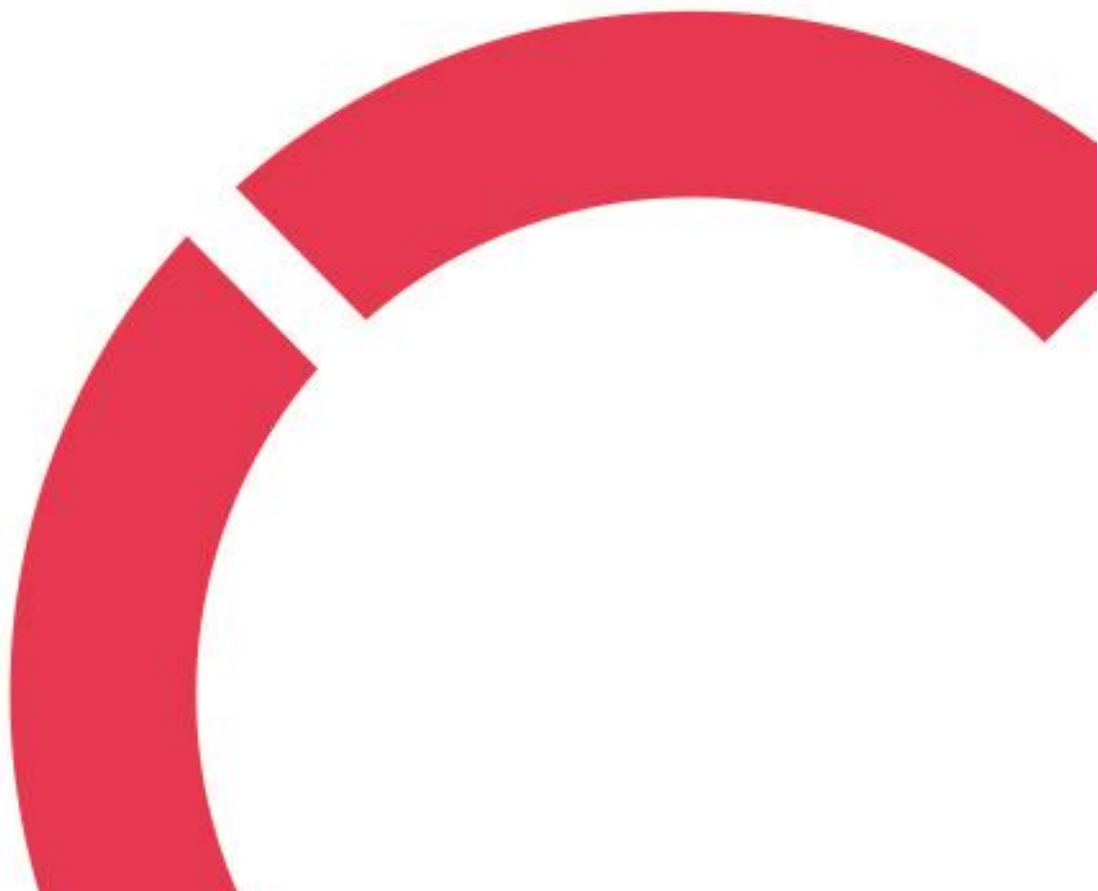
USING FIGMA AS UI/UX DESIGN FOR RECYCLE WASTE

Thesis

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ABSTRACT

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<p>The world is filling up with waste. It is important to find the best approach to the solution. By creating several functional interfaces with the Figma application, one user can collect recyclable waste and sell it to a recycling plant. As a result, the pressure on the landfill will be reduced and on the other hand, the user will be able to ensure his own employment. The thesis exposes UI / UX and its usage, requirements, current needs, and its role in creating application interfaces. The importance and usage of Figma for designing interface will be observed in this thesis. A simple and intuitive application is showing some UI to recycle garbage.</p>		

Key words Application design, Figma, Recycling waste, UI/UX.
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ABSTRACT

CONCEPT DEFINITIONS

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1 INTRODUCTION

As much as proper disposal of waste is important for keeping the environment safe, storing recyclable waste is very necessary these days. Its importance is increasing dramatically regularly. Proper storage of recyclable waste is the best way to manage waste and reduce its harmful effects on the environment. The process of waste recycling is an environmentally friendly process whereby recycled materials can be converted into new materials. Its role is also immense for conservation of natural resources.

The UI stands for User Interface which is a design of visual and interactive elements of website or product which has icons, colors, button, and fonts. Way of a user interacts with the interface to complete tasks efficiently. Moreover, UX is the abbreviation of User Experience which is the overall experience of a user after usage some sort of interfaces to fulfil their goal and satisfaction. The importance of UX is very much what affects a user on a product or service in a positive or negative way. Many brands are at the top of popularity today due to highly satisfying experience of users. Good UX design usually involves user satisfaction, comprehensibility, ease of access and, visually attractive. UX design can encompass a wide range of disciplines, including research, prototyping, testing, and visual design. UX design can have a very important impact on society, building equal access for all in areas such as education, law, and healthcare. The user also has some discomfort about interfaces which do not meet user's expectation. Therefore, designers must keep their users in mind while designing interfaces. This helps in making of UI/UX. Also, the environment where app is used must be considered. A good design and usability contribute a lot of user satisfaction when the user can easily understand and use it. The importance of saving recyclable waste can be taken to extremes when it is converted into a job. An application will become a workplace throughout which the main task of the workers will be to collect recyclable waste and sell it to the recycling plant to earn money.

UI/UX design tool, Figma can help designers create a seamless and intuitive experience for users. Figma is a cloud-based design tool which allows designers to collaborate in real-time and create high-quality mock-ups, prototypes, and wireframes. Figma also has plethora design features. With the help of Figma, designers can make a reactionary and scalable UI design that fill the total need of recycling waste. Figma allows a group to work together, even if they work together at the same time. This is very beneficial for both designers and stakeholders. The stakeholders can discuss in mind where any changes are required. In summary Figma can be used as a UI/UX design tool to build a user-friendly and approachable interface for waste recycling that considers the specific needs of users.

Through an application, everyone from ordinary people to the application users will be able to know the benefits of saving and recycling recyclable waste through important information. Through the application, people can quickly store and recycle recyclable waste efficiently. Apps can encourage people to reduce waste by offering tips on how to minimize waste in their daily lives. The application can also track a user's perception of recycling. Mobile applications are cost-effective compared to other methods of promoting recycling; It's not even required physical door-to-door service or mailing. A grouping of users will earn money from this platform by using an application. There will be people who stray all over the society and pick up recyclable waste from all places. They can sell these items through the app later and this will help them financially and benefit the environment. They are called "Collector".

2 USER INTERFACE AND USER EXPERIENCE (UI/UX)

UI/UX (User Interface/User Experience) is a multidisciplinary field that focuses on the design and experience of digital products, such as websites, applications, and software. It encompasses various elements that aim to create user-friendly, visually appealing, and engaging interfaces. UI (User Interface) primarily deals with the visual and interactive aspects of a product. It involves designing the layout, typography, color schemes, icons, buttons, and other visual elements that users interact with. The goal is to create a visually appealing and intuitive interface that guides users and enables them to perform tasks easily and efficiently. UI designers consider factors such as consistency, hierarchy, and visual feedback to enhance the usability and aesthetics of the interface. (Krug 2014.)

UX (User Experience), on the other hand, focuses on the overall experience users have while interacting with a product. It goes beyond visual design and delves into understanding user behaviour, needs, and goals. UX designers conduct user research, such as interviews and usability testing, to gather insights and advise their design decisions. They create wireframes, prototypes, and user flows to plan and optimize the user journey. The goal of UX design is to create a seamless and satisfying experience for users by addressing their pain points, streamlining tasks, and enhancing overall usability. A well-designed UI/UX considers both the functional and emotional aspects of the user experience. It aims to create interfaces that are not only efficient and easy to use but also visually appealing and emotionally engaging. This involves incorporating elements such as micro interactions, animations, and storytelling techniques to evoke positive emotions and create a memorable experience for users. Effective UI/UX design has several benefits. It enhances user satisfaction and engagement, leading to increased adoption and usage of the product. It reduces friction and errors, improving task completion rates and overall efficiency. It also builds trust and loyalty, as users are more likely to return to a product that provides a positive and enjoyable experience. UI/UX design is a vital aspect of creating successful digital products. By combining effective visual design with a deep understanding of user needs and behaviour, UI/UX designers create interfaces that are not only aesthetically pleasing but also intuitive, efficient, and emotionally engaging. (Norman 2013.)

2.1 USER INTERFACE (UI)

UI (User Interface) refers to the visual and interactive elements of a digital product that users interact with. It plays a crucial role in creating an intuitive and user-friendly experience for the users. UI design focuses on the aesthetics, layout, and functionality of the interface, aiming to enhance usability and visual appeal. One of the key aspects of UI design is visual design. This involves creating a visually cohesive and appealing interface by considering elements such as typography, color schemes, icons, images, and layout. Visual design helps establish a consistent and recognizable brand identity and enhances the overall aesthetic appeal of the product. Layout is another important consideration in UI design. It involves organizing and arranging the various interface elements in a logical and intuitive manner. A well-designed layout ensures that information is presented in a clear and organized way, guiding users through the interface and enabling them to find and interact with the desired elements easily.

UI design also includes the creation of interactive elements that users can engage with, such as buttons, menus, forms, and navigation systems. These elements should be designed with usability in mind, considering factors such as size, placement, and affordance. Buttons and menus should be easily distinguishable and clickable, while forms should be straightforward to fill out. Navigation systems should be intuitive and provide clear pathways for users to navigate through different sections of the product. Consistency is a key principle in UI design. Consistent design elements and patterns across the interface help users develop a mental model of how the product works, reducing cognitive load and improving usability. Consistency applies to visual elements, such as colour schemes and typography, as well as interaction patterns, such as the placement and behaviour of buttons and menus. (Cooper, Reimann, & Cronin, 2007.)

Another important aspect of UI design is feedback. Feedback provides users with information about the actions they perform and the system's response to those actions. It helps users understand whether their interactions have been successful and provides reassurance and guidance. Feedback can be visual, auditory, or haptic, depending on the nature of the product and the context of use. For example, when a button is clicked, a visual change, such as a colour change or animation, can indicate that the action has been registered. Accessibility is a critical consideration in UI design. Designing interfaces that are accessible to users with disabilities ensures that everyone can use and interact with the product. UI designers should consider factors such as colour contrast for users with visual impairments, providing alternative text for images, and ensuring keyboard accessibility for users who cannot use a mouse. Accessibility

guidelines and standards, such as the Web Content Accessibility Guidelines (WCAG), provide specific recommendations for creating inclusive interfaces. UI design encompasses various elements that contribute to creating a visually appealing, intuitive, and user-friendly interface. It involves visual design, layout, interactive elements, consistency, feedback, and accessibility considerations. By focusing on these aspects, UI designers strive to optimize usability, enhance the overall user experience, and promote engagement with digital products. (Norman & Nielsen 2019.)

2.2 USER EXPERIENCE (UX)

User experience (UX) is when a user experiences a product or any service. It involves the interface, design, functionality, simplicity, colour, previous experience. Again, the emotional response of the user is involved. For any product to be successful, the user experience derived from it must have high levels of loyalty and satisfaction. As a result of a good experience, one aspect, the user highlights its qualities to others, and on the other hand, through positive reviews, the user shares the good experience of the product with other people on social media. It becomes a big marketing and at one point it makes it easier for the product to gain recognition and reputation. From this it is easily understood that user experience is very important for a product's reputation and distinctly recognizing. According to Peter Morville, a pioneer in the field of user experience and information architecture, UX encompasses seven key aspects: usefulness, usability, findability, credibility, desirability, accessibility, and value. Products that are beneficial to users and offer solutions to their complication, while being user-friendly are deemed valuable. Usability refers to the degree of simplicity and enjoyment experienced by the user when using the product. Findability embodies the ease of searching and navigation, while credibility relates to the perceived reliability of the product. Desirability encapsulates the emotional pull of the product, while accessibility pertains to capable inclusiveness for all users. Meanwhile, value highlights the costs and advantages of the product from the user's point of view. Just as a company can bring itself to the highest level of success through a good experience with its product, so when a user has a bad experience with a product or service, users who lose satisfaction with the product begin to look down on the company that produced it. Disappointing experiences indicate to a company that they have failed to meet the expectations of their customers. Consequently, organizations should allocate resources towards investigating user experience and devising solutions that satisfy their customers' requirements and prospects. (Morville 2004.)

Researching User Experience (UX) is extremely important as it is a very effective and widely used subject in today's world. If a product is produced by doing good research on the expectations, views, satisfaction of the users, the users can be completely satisfied with it and the reputation of the product, and the company can be easily achieved. Different methods can be adopted for research such as survey or interview. Apart from this, the sentiments of the users can be well known from the reviews. By

understanding the users' expectations and pain points from these activities, redesigning changes, or inventing new vertical designs will respond well in the market. For conducting UX research, there are several top-notch methodologies available, including defining research objectives and questions, selecting appropriate research methods based on those objectives, recruiting representative participants, and analysing collected data. However, incorporating stakeholders' perspectives in the research process is crucial to ensure design products with internal scrutiny. UX research management is a gradual procedure, and regularly gathering feedback from users can facilitate prompt updates in product design. In today's competitive market, organizations that prioritize UX research and incorporate user feedback into their product development processes have a better chance of succeeding. (Mohamed 2019.)

Designers should create designs keeping in mind the needs of the user. Designers should keep in mind the expectations, desires, needs and preferences of the users to create a design so that the user gets a good experience through it. The user must determine what service he expects from a product which is selected through a series of steps. The user must identify the target. If the goals are identified, it will be easy to create a design based on that face. This can be achieved through survey or common interview. However, information must be collected from all categories of users. User goals should be prioritized. By prioritizing, it will be easy to understand which things should be highlighted in an application and which ones should be eliminated. Also, the business goals should be kept in mind. Creating a successful and informed UX requires prioritizing the user experience. Arranging the user objectives in terms of priority, putting greater emphasis on the objectives that have a notable influence on user satisfaction and commitment. A sense of contentment and attachment leads to more enduring clients who are more liable to advocate and promote the product to others. Users do not have to be simple. If something is very important but difficult, it should be included in the design tool. Less important things can be excluded. Thus, when the user needs can be properly determined, it will be easier to tailor the design and meet the customer's needs. Therefore, the user will go through a better experience. It is crucial to regularly test and enhance UX to meet users' aims efficiently. Consistent testing and feedback can help designers unearth and tackle user problems and discomfort. Successful UX comes from designing for user needs, prioritizing their goals, and aligning designers UX with them, leading to eventual user satisfaction, loyalty, and business prosperity. (Goodwin 2011.)

In this digital age, UX design has taken the scope of business to another level. Today, its use is so abundant that application UX is one of the best businesses of today. UX design focuses on creating meaningful and engaging experiences by understanding users' needs and motivations. As the business is benefiting through it, the rate of revenue is also increasing regularly. Importance of UX design has already derived in many studies. For example, a report by Forrester Research found that "applying a focus on customer experience increases their willingness to pay by 14.4%, decreases their reluctance to switch brands by 15.8%, and increases the likelihood of recommending product by 16.6%". Additionally, a study by Adobe found that "companies with a focus on customer experience outperformed the S&P 500 index by 43%". Good UX design can keep a user on an application or website for a long time. As a result, if it becomes an e-commerce site, so there is a possibility for customers to buy more products from there, which can lead to more profit for the business. Also, when an application is easy to use for all types of users, they will feel satisfied using it and will be consumed more time which will lead to more profit. Hertz, a renowned e-commerce brand, sought to optimize its car rental process by undertaking extensive user research and testing to identify users' challenges. Subsequently, they revamped the website to ensure a hassle-free and user-friendly reservation process. The outcome of this reengineering was a 60% climb in successfully booked rentals for Hertz. Making a website or application easy to use can make customers happy and keep them coming back. This can help businesses make more money and increase their reputation. Apple is a good example of a company that uses good design to keep its customers satisfied and loyal. They have a lot of loyal customers and are very popular. Good UX design makes it easier for people to use a platform, reducing the chances of bugs and errors. This leads to less need for customer support, which saves money and time. A good example is the UK government's website, which improved the user experience and reduced support calls by 75%. Investing in UX design can also help a business to stand out starting competition, improve brand recognition, and gain loyal customers. (Harrison 2020.)

2.3 DIFFERENCE BETWEEN UI & UX

Nowadays UI and UX are two very popular and effective terms. Technologically their use is now immense. They represent different aspects of different websites or applications. UI deals with the various design, layout, colours, of a website or an application whereas UX is always concerned with the user experience. UI refers to the layout, design, icons, fonts, colours and other aspects of a website or application's interface that are used to facilitate a user's experience. A good UI design should be easy to navigate, visually appealing and provide clear and concise information. UX, on the other hand, describes the user experience of using a website or application. A simple and efficient way to complete the work will be possible when developing the intellectual property strategy of the product. Users want an intuitive and pleasing UX design, which will make their work easier and be easy and concise for the overall experience. Messaging and navigation should be as simple as possible to better understand the contrast between UI and UX, we can explain using a car analogy. UI is the material that users can display, such as vehicle design, layout, and visual elements. UX is the technique of driving a car and its quantitative experience, which allows the user to use the car easily and helps improve its performance. A user can easily adapt to this design if a good UI can be developed. Beautiful design will attract the user and make the interface standard. On the other hand, good experience will make the user happy, and he will feel the satisfaction of the usage. Also, user will share to everyone. The goals of UI and UX are also different. The goal of UI is to create an attractive interface through buttons, colours, menus, icons, navigation. So that, the user can appreciate the design of the interface. On the other hand, the main goal of UX is user experience and positive feeling through easy touch. A typography and colour usage decision are first made to show user-intervention in UI design. Several mock-ups and prototypes are then created to show users the typical layout of the interface. On the other hand, UX design then reviews and analyses user needs, behaviour and discomfort points. Product features, functionality and content are then iteratively designed and refined. Also, developing design elements for user-friendliness is an important part of such a process. Teams also work in different processes. UI designers focus on each of the different tools required to create the best interface, and UX designers work on gathering product insights, performance, usability, research, and user experience. UI design is the first impression of users, and a good UI design can attract users. A very good UI design makes the product easy to use and user friendly. But if an existing UI design does not meet any of the user's needs, it can be difficult to use and incomplete. UX design influences user sales and customer satisfaction and loyalty, and thereby leads to reduced costs, increased revenue, and growth. (Lidwell, Holden, & Butler 2010.)

3 COMMONLY USED OF UI/UX PRACTICES

UI/UX practises constitute an essential when creating user-centred design websites. These involve simple directions, simple visual structures, and uniform design elements which enable others to easily interact with interface. Efficient UI/UX looks at customer needs, puts in responsive plans, and values availability, leading to interesting and easily accessed digital items. (Horowitz, & Preece 2017).

3.1 Commonly used UI elements

User Interface (UI) Design involves creating interfaces that are easy to use for users. UI Design incorporates concepts from interaction design, visual design, and information architecture. Consistency and predictability in interface elements are important for task completion, efficiency, and user satisfaction. Interface elements mentioned include input controls (buttons, text fields, checkboxes), navigational components (breadcrumb, slider, search field), informational components (tooltips, icons, progress bar), and containers (accordion). When choosing interface elements, it is crucial to consider trade-offs, as some elements may save space but increase the user's mental burden by requiring them to guess their contents. Good UI requires design consistency in UI elements for a great product experience and highlights its importance for UX designers. Consistency is described as a commitment made to users, allowing them to easily interact with a product by recognizing and predicting actions based on familiar UI elements. As users become more familiar and regular users, they develop trust in the product, which is a result of consistent design. Following UI practices to ensure a consistent UI for effective product design. (William, Kritina ,& Jill 2010.)

3.1.1 Text

Text is one of the most important elements in creating a UI. The presence of text is visible in every UI because it allows the user to easily navigate through the text to understand the instructions in the application. Text usually acts as a communication channel between the user and the application. The UI typically includes essential information such as text labels, titles, buttons, error messages, tooltips, and notifications. To use the text in the UI, the designer chooses the T symbol and transforms the text into different designs, colours, and font styles. These contents should be short, clear, and straightforward,

using the interface to help users. Maintain consistency and usability throughout the UI by using a consistent tone and language. To create effective UI text, it is crucial to consider the perspective of the intended users, including their cultural background, language skills, and reading habits. However, by adhering to established UX writing guidelines and best practices, text quality can be greatly improved, resulting in a user-friendly interface that is easy to understand and navigate. (Kruger, & Carpendale 2017.)

3.1.2 Buttons

In UI Design buttons are essential functional element which can use to switch one to a different interface, they are made to stand out visually and they usually include text or images that tells the action what they perform. Well-designed buttons serve a vital role to encourage interaction between the users. Additionally, the colours of Buttons aimed to help the views stand out from the background. The vibe is assured by high contrast. Buttons should be sized precisely and placed properly. Maintain a consistency of styles in buttons throughout the interface to provide an efficient and predictable user experience. Create buttons which are as easy to use as likely keeping into concern elements such as size, keyboard navigation, and colour contrast for those with disabilities. (Shneiderman & Plaisant 2010.)

3.1.3 Icons

In a user interface icon are graphical symbols used to represent actions, objects or approaches. Icons are distributed to address information quickly and there is no needed long text. Icons should be easy to understand, easily recognizable, and satisfied with the overall design. Additionally, icons should be simple and clear, keep away unnecessary details to ensure quick recognition for icons to form a clear design, fix to a consistent style and visual language. Clear and concise meaning should be suggested by icons. Alternatives that people may recognise are frequently employed to improve understanding. Screen resolutions and devices, design icons are still familiar and readable at varying sizes. When trying to ensure that images are readable by users with visual challenges, designer takes colour contrast into consideration and contain additional text. (Cooper, Reimann, Cronin 2007.)

3.1.4 Boxes

When talking about user interface (UI) design the word "box" typically refers to a square or rectangular box that is used to store and arrange content. These boxes serve as the basic building blocks of layout design and aid in organising an interface's visual hierarchy. Boxes frequently line up with grid systems, offering an organised framework for arranging and lining up components on a page. In UI layouts, grids improve alignment and consistency. Information like text, pictures, or other UI elements are saved in boxes. For a presentation that is better organised and looks good, designers assist in putting related information in one group. Whenever it comes to responsive design, boxes are essential for adjusting the layout to various screen sizes. To fit different devices, designer can easily expand or build. Boxes can be clearly different from one another by using backgrounds and borders. This improves the interface's overall simplicity and beauty. (Tondreau, McFarland, 2015, 2014.)

3.1.5 Navigational Components

An important element of UI is navigation. [Navigational components assist users in navigating various sections or pages of an application or website, functioning as a roadmap. These elements guide users to the desired information or functionality they are seeking. Designers use navigation to help users move from one page of an application to another, and to another form, page, or website with the click of a button. This makes the user's application very easy to use and gives a good experience about the application. With Figma, designers create interfaces that navigate to other interfaces with buttons, text, or images. A commonly used navigational element is a menu bar, placed horizontally at the top of the interface, providing options for users to access different sections of an application or website, making navigation easier. Sidebar navigation is a list of internal links, which provides users with a clear overview. These navigational elements in UI design provide functionality and ease of navigation to users, making them usable and satisfying. (Lidwell, Holden, & Butler, 2003.)

3.2 Commonly used of UX process

User experience is a very important aspect of a product's market value. A product can become very popular with the masses through experience, while bad experience can lead to loss of reputation of a product and brand. These points are very important to keep in mind. Achieving satisfactory UX requires some important practices that have a positive impact on creating an exceptional user experience. (Mathieu, 2019.)

3.2.1 User Research

User research is the foundation of UX design. The user's inner needs, likes and dislikes can be easily understood through research. This exercise helps to understand the user's goals. Through research, the user's preferred design patterns and ease of use are revealed. Among the important topics of the research, it should be continued with priority given to the survey and interview from the users. This practice can lead to good feedback from the users on the product. So, user research techniques such as interviews, reviews, and usability testing provide valuable feedback and inform design preferences, resulting in products that fulfil user expectations and provide the optimal user experience. (Cooper, Reimann, & Cronin 2007.)

3.2.2 Information Architecture

Information architecture (IA) always focuses on how to properly organize information within the product and whether it can be given a complete structure. It works to make the design clear to the user and intuitive navigation systems, categorizing content, and developing hierarchies that allow users to find what they need efficiently. IA ensures that information is placed in the right place that provides a good user experience. IA includes preventing the use of redundant or unnecessary information and managing screen fresh look and IA functions. By ensuring IA presents information in a logical and meaningful way, it reduces cognitive load and increases user engagement. Ideally, through effective AI, designers facilitate intuitive navigation, which improves user satisfaction and helps complete tasks successfully. With this technology, users' experience becomes a little easier and they can Google more easily. So, more benefits are possible for the users of this technique. Thus, the practice of IA is highly critical in the field of UX. (Morville, & Rosenfeld 2006.)

3.2.3 Interaction Design

Interaction design involves a user's interaction with the product. Interaction design is the proper practice of how people will use a product. It consists of creating plans, sketches, and beautiful models to understand how the product will behave. The main objective is to use the product so that it seems natural and easy to the user, to guide the user in the right way without any problem. Interaction design also focuses on giving people feedback, making the product respond correctly, and preventing errors. When talk about interaction design, and discussing how the product's interaction with the user will be achieved. It is a dance in which users and products are seamlessly integrated into one another. To create this dance, make a plan called a user flow. User flow shows how people will use the product, such as moving from one screen to another, and how they can achieve goals. If these steps are properly thought out, users will easily find what they need and get things done without getting confused. Wireframes and prototypes are also part of interaction design. They are usually concerned with structure and layout rather than colors or images. Especially the button, the place of the menu, works with the appropriate together of different parts. Designer can create products that people enjoy using. When people feel satisfied and in control of using a product, they are more likely to adopt and use it. So, interaction design plays an important role for the product, so that users can use it easily and successfully. (Norman 2013.)

3.2.4 Visual Design

Visual design plays a very important role in UX. The main objective here is to present attractive interface. Creating the best interface requires the best selection of colors, typography, iconography, and all other graphical elements that result in the best visual design. Here designers can show their favourite art that can touch the user's mind through good experience and beautiful visuals. Designers can express their passion here on a brand, product, design, or any other website. A brand can be established as a result. The final view is vital, as it influences the overall user experience, including the quality and reliability of a product. At the end, it captures the user's efforts and satisfaction. (Clayton 2018.)

3.2.5 Usability Testing

This practice is extremely important. Because no matter how much best research and effort is put into a product, it is normal for there to be errors and customer dissatisfaction. Even the maximum skill can make mistakes in app. Not all user expectations are the same. Usability testing primarily involves observing users interacting with a product to identify problems and gather feedback. Designers can uncover potential roadblocks and pain points along the user journey by using multiple methods to test usability and make iterative improvements based on user feedback. This ensures that designs are consistent with users' mental models and expectations, leading to increased usability and user satisfaction. For this testing, designers can perform usability testing using lab-based testing, remote testing, and A/B testing. By applying these methods practically, the design and development process is linked together. Designers test the usability of their products by directly interacting with users and observing their feedback. This allows designers to make the product easy to use and satisfy users by images. Designer can use tools to simplify the design process, for example creating interface prototypes or models that help user experience. All these methods combine to facilitate automated usability testing. (Nielsen & Norman 2014.)

4 USER INTERFACES

A UI designer designs beautiful, user-friendly applications that enhance user experience, efficiency, and satisfaction. UI design plays an important role in a user's perception of a product. Good design makes a brand well-known and famous. Also, a good UI helps reduce user errors. A great UI can keep a customer on an app for a longer period, resulting in more sales and increased profit potential for a marketplace. An application can be developed so that some of the recyclable waste can be collected by the employee using the application and sold in the market. This will create a new job, reduce the pressure on the landfill and ensure the use of recyclables. The application collects the user's data to identify user and contract user for this work, for which the user must fill a registration form. After logging in through the prescribed information, the worker can see the daily updated sale price list of recyclable waste and can easily visit the recycle plant store and sell user's collection accordingly. Easy to use interfaces will be created so that the user does not have any difficulty to use and from the statistics user can see user's account by himself without any mistakes. The interface of recycle application is described below along with the Figma link and pictures of all interfaces. (Nielsen, 1993.)

4.1 Welcome Interface

The first interface of recycle waste application is called welcome interface. As soon as a user logs into the application, user will be brought to this interface. The main objective of the application is to properly collect recyclable waste and produce new products from it. Besides, proper disposal, collection and recycling of garbage can lead to a beautiful, green earth. The background colour of the homepage has a dark green overlay. Also, other interfaces may use a shade of green or something close to it. The first interface of the application will write a welcome message to its customers "Delighted to have you in Collector team...". The logo of the application will be given right below it.



Figure 1. Welcome Interface



Figure 2. Logo

The logo is drawn in such a way that the background of the logo is C shape. C stands for the first letter of the collector. A map of Bangladesh is placed between C. The application is primarily intended for use in Bangladesh. The background color of the logo is green, and the middle color is red, following the colors of Bangladesh's flag. The logo will also encourage application users or employees to love their country. The logo will be used in a different place on each interface.

Just below the logo, a picture of a different type of trash bin placed. This image clearly shows that these types of garbage are recyclable. Below the image there is an accessible sentence that says whether the user has an account before, if so then it will ask to click on the blue sign in text next to it to go to login interface. Moreover, if the user does not have an account, then he must go to another interface to press the sign-up button again for registration.

4.2 Login Interface

The user can enter this interface by clicking on the login text of the previous interface. When a user has an account, user can login to the home page of the application with user's username and password. Left arrow sign is given on the upper left side of this interface so that the user can click on it to go to the back interface. The logo of the application is given at the bottom right. Below that there is an option to enter username and password by which user can login.

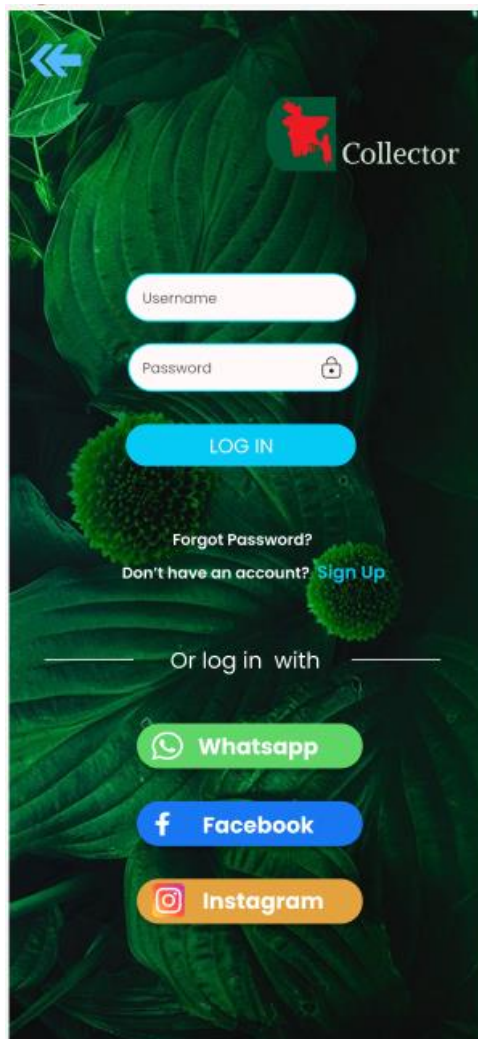


Figure 3. Login interface

Below this again the signup text button is given so that by touching it the user can go to the registration form page. Apart from this interface, there are facilities like logging in with WhatsApp, Facebook, and Instagram. The background image of the interface and its colors are chosen considering the purpose of the application. The size and spacing of each button are moderated so that the user can easily understand its functions.

4.3 Sign-up Interface

The user can come to this page by clicking on the sign-up text on the welcome page and by clicking on the signup text on the login page. Like the previous interface, it also has an arrow symbol on the top left, which the user can press to move to the first interface. Below is the application logo in the middle portion. The main function of this page will start under the logo. Sign-up form will be given here. User must fill this form to open his account. At this time some important information the user must give regarding it. This will ensure user information, and identification. The user will be required to provide the information in each cell of the form. First name and last name of the user must be mentioned in the form. Email address should be placed below it.



The image shows a mobile application interface for a sign-up form. The background is a dark green gradient with a subtle pattern of white dots. At the top left, there is a blue double-left arrow icon. In the center, there is a red map of Bangladesh icon followed by the text "Collector". Below this, the title "Sign Up Form" is displayed. The form consists of several input fields: "First name" and "Last name" (two separate rounded rectangular fields), "Email address" (a single wide rounded rectangular field), "DOB: --/--/----" (a rounded rectangular field with a date mask), "Mob: xxxxxxxxxxxx" (a rounded rectangular field with a phone number mask), "ID No. xxxxxxxxxxxx" (a rounded rectangular field with an ID number mask), "Password" (a rounded rectangular field with a lock icon on the right), and "Confirm password" (a rounded rectangular field with a lock icon on the right). Below these fields is a prominent blue rounded rectangular button labeled "REGISTER". At the bottom, there is a link that says "Already have an account? Sign In".

Figure 4. Signup interface

Moreover, the date of birth and mobile number must be always entered to provide user information. Below this will be the Identification Number or National Identification Number through which the user will confirm his identification. Next, the user will set a password of his choice and enter it a second time in Confirm Password. After entering all the information, the user will click on the register button and his account will be created and he will be taken to the main page of this application. Moreover, the end of this page, there is a sign in text again, with which a user can directly go to the login page by clicking on it.

4.4 Home Interface

The most important interface of this application is the home page interface. After logging in, a user will come to this interface and now user will get almost the same options as the default interface.



Figure 5. Home Interface

The interface is marked with an arrow on the upper left side through which the user can go directly to the first interface i.e., Welcome interface. The logo is placed on its right edge. Just below it is the recyclable symbol with the image of the earth. By this it is meant that the recycling of garbage plays a role in creating a beautiful and green world. There is a search button in the middle of the picture so that the user can search the categories easily. Below are the different categories of recyclable garbage, by clicking on one of them, the user can see the daily selling price. User can sell his/her collected garbage based on current day price. Five types of waste are considered recyclable on this page: plastic, paper, glass, metal, and electronics. The collector can calculate the amount of garbage he collects by looking at the cost of different types. Daily offers and rewards are also given on the home page. At this time the user can see different special offers every day. If the user will sell the offer amount, he/she will get additional bonus as a reward. This page features four buttons at the very bottom. By pressing each button, the user can go directly to a different interface. Also, when a user is on the interface, the symbol of that page will be highlighted with a background circle. This will make it easier for the user to understand that he is on a page. On the homepage, the home symbol is highlighted and located at the bottom left. there are three more symbols which are statistics, profile, and exit.

4.5 Product Description 1 Interface

Among the five different types of products on the home page, the user will be taken to an interface continuously clicking the View More text button of the first three. Today's sale price list of first three will be given in this interface. Now will be the price list of plastic, paper, and glass items. The interface has an arrow sign that will bring the user to the home page.

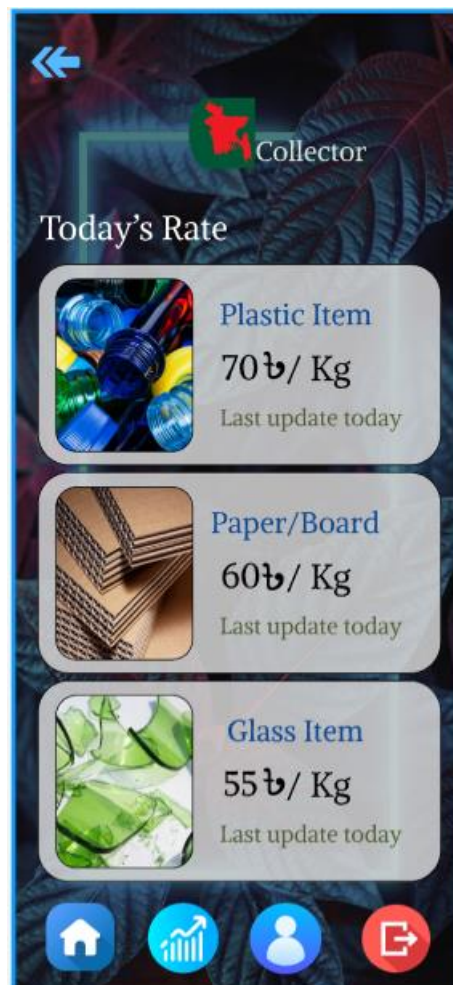


Figure 6. Product description 1

The logo can be seen in Interface Today's rate of plastic, paper, and glass sales can be seen. A collector will see the selling price of his daily collected recycled waste and sell it to recycle plant accordingly.

This price will vary based on the market price. Below are the main four symbols of the application through which the user can easily access any interface.

4.6 Product Description 2 Interface

This interface is similar like the previous interface. For the reason that the two interfaces work equal. The fourth product of the home page was metal waste. The user will come to this interface by pressing Read More below Since there are different types of metals and their prices are different, a separate interface has been created to show the sale price of the metal.



Figure 7. Product description 2

There are four types of metal components which are copper, aluminium, stainless steel, and iron. Their different prices are fixed based on the market price. These prices also change as per daily separate price list. Apart from this, all other interfaces are designed like the previous interface like figure 5 & 6.

4.7 Product Description 3 Interface

The fifth product category on the home page was electronics waste. It also has a separate interface so that users can sell their found electronic products. But this issue is not as simple as the previous issues. Because it is very important to determine the quality of electronic products which will determine the price of the recycling plant through monitoring. That is, like other Products of this type will not have the opportunity to view the pricing application and subsequently sell it.

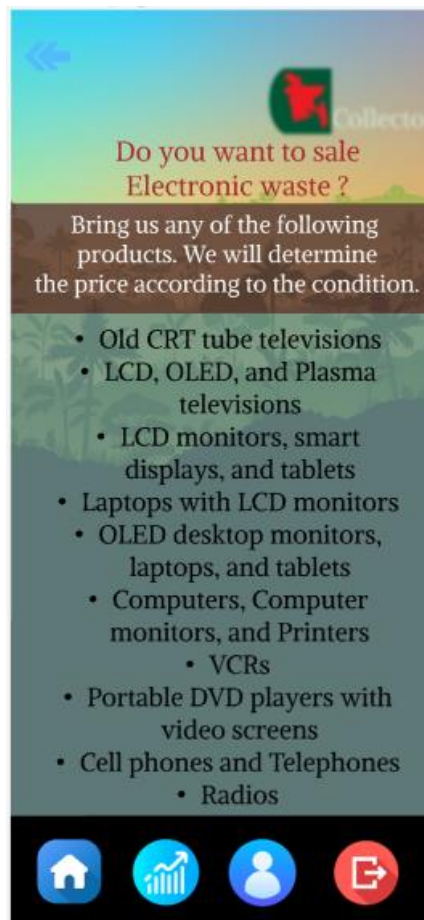


Figure 8. Product description 3

For this Interface first go to the recycling plant and show the product and then determine the price. Therefore, no value has been assigned to this interface. Simply put, it does not matter what type of electronics recycling plant typically buys. Because interface layout is simple. Back arrow is provided through which the user can go to home page. User can see a list of electronics consumption that recycle pants accept. Bottom of interface are the four easily accessible symbol buttons existing. Such as Home, Contact ,Stats, & Exit.

4.8 Statistics Interface

Statistics interface is very important interface for a user. Here the user can see earned earnings and bonuses. Also, user can see the earnings for each day of the running week. They can also see the total income and total bonus of the running month. First, there will be arrows on the upper left side of this interface through which the user can go directly to the home page. A little later the amount of earned income of a user for the current day will be given. It will be visible increased in a round circle. Just below that, there is a logo of the application. Under this, the daily earnings of the current week will be visible through a bar chart diagram where it is easy to understand how much a user has earned on any given day. A small summary will be given below where the user's today's income, this week's income, this month's income, this month's bonus, and total account will be given. Finally, there are four icons below where the statistics are highlighted due to their presence on the page.



Figure 9. Statistics

4.9 Profile Interface

By pressing the profile button from the home page, the user can come to the profile page. This interface will provide the information to the user, and the user can correct the errors of information from this interface according to needs. Also, if users wants to update any information, they can do that. The user's name will be visible in large letters on the user's picture. Just below that will be the user's picture.



Figure 10. Profile Interface

The user's information will be right below it. Information includes name, email address, date of birth, phone number, national identification number and password. If the user makes a mistake while registering any of his information, user can correct it later by coming this profile interface and pressing the edit button. At the bottom right is the logo of the application. At the bottom, there are four symbol buttons like the home page, from which the user can directly go to another interface. Here the profile symbol is highlighted around the user profile interface.

4.10 Exit Interface

This interface is very simple. There are very few functions kept here. First, there is the logo of the application on the top Left. Then there is a question below which is "Are you sure to exit?" If user presses the red color exit button on any interface, User will come this interface and automatically face this question.

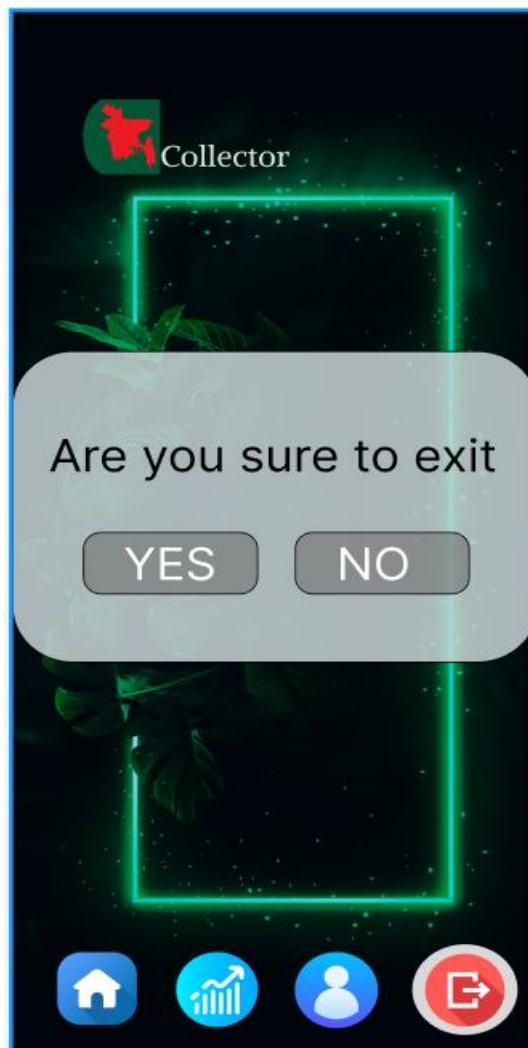


Figure 11. Exit Interface

If the user clicks yes to answer the question, they will exit the application and if user answers no, they will go directly to the home page. In addition, there are four icon buttons below this interface through which the user can go to the desired interface. The exit button is highlighted in this interface due to being the exit interface.

5 CONCLUSION

Waste has become a threat in today's world. Landfills are getting filled regularly and its growth is increasing. Most of the time the recyclable waste is not stored due to lack of care. Figma is such a epic design tool for UI/UX that is possible to use to address the emission of waste management. Figma can make users more aware by creating functional UI. This will create a garbage free environment as well as many waste materials will be made into usable products. A good garbage disposal system and improved method of extracting recyclable waste from it can be presented through creating some interfaces that will help the user and build a beautiful clean green world. When the storage of recyclable waste is converted into the work of a class of people, then the awareness of the public will increase from its proper storage. As a result, the pressure on the landfill will be reduced, maintaining the balance of the environment. On the other hand, if talk about modern technology, firstly must talk about mobile applications which are presented to the user through some designs. Figma offers a plethora of features that make it ideal for UI/UX design, including prototyping and collaboration tools.

Through Figma, create designs that were intuitive and user-friendly, encouraging users to recycle. As a result of the use of Figma, the templates made the designer more flexible, and the work speed was much faster. Using this magnificent tool, it is possible to liven up a class of profession by creating some particular UI of an application. By means of which the solution of the present artificial problem will become much easier. Besides, employment will be created. The Valuable UI application created by Figma along with advanced technology can reduce the pressure on landfills save recyclable waste and make this green world beautiful.

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