



COSC2653

User-Centered Design

COSC2653 - Assignment 2
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Part 1: Design Document

Introduction

The goal of this report is to correctly identify the clients ("Jewelry Co") requirements and goals for the application, identify in detail the intended user groups of this application, these details will include the users' needs and goals, this information will then be used to generate personas for the user groups. This information will then be used to assist in the design of wireframe examples of the application and long term will be used to create a functional prototype of the application to present to the client.

Our client a major jewellery retail agency, **Jewelry Co** has recently partnered with one of the biggest logistic companies in the world; We have been commissioned to design and develop a mobile application that allows users to quickly purchase and deliver customized gifts to anyone anywhere within 20 countries.

The design requirements supplied by the client are as follows:

1. During purchases, the client needs their customers to be able to customize the jewellery with engravings on the jewellery itself and the gift boxes.
2. Customers can also craft gift messages to be included with the delivery card.
3. Both the customers and recipients (if not secret) can easily track their gifts until the completion of the delivery.
4. **Optional:** Customers can view their order history and accrue loyalty points

The core goal of our client is to reach customers in their targeted 20 countries to receive jewellery purchased and customized by anyone in any country around the world as gifts or if they are in one of the 20 countries to purchase jewellery for themselves, to accomplish this goal the application must meet 3 or more of the clients' design requirements whilst maintaining a high level of usability for the end-user, for the application to be considered successful by our client.

Jewellery Co has not supplied or indicated a name that they wish to use for the application, the application henceforth will be known as **Jewelry Co Online**. Until such time the client wishes to supply a name of their choice for the application.

Prototype URL:

<https://www.figma.com/file/4WH8B1a3sVSE3dtZMnqtFP/Phototype?node-id=0%3A1>

User Groups

The target user groups of the application are online shoppers, however, from the research, this can be broken down into age groups and quite possibly group by purchase type being a self-purchase or a gift, however, more data is available for age groups.

The bulk of the e-commerce Jewelry purchases surveyed in 2020 was made by those born between 1981 – 2012 (Millennials and Generation Z) as they are more willing to make large purchases online **[Reference 1]**; These circumstances seem unaffected by the COVID-19 restrictions forcing people to make more purchases online, as further research shows that online jewellery sales have increased on an average of 8.64% annually since 2012 – 2019 and stagnated between 2020 and 2022. **[Reference 2]**



Online Shopper – Aged 18 – 41	<ul style="list-style-type: none"> • Millennial or Generation Z • Highly knowledgeable in the use of mobile technologies • Within the traditional age range for marriage • Prone to making purchases online • Most likely has a PayPal account
Online Shopper – Aged 42 – 65+	<ul style="list-style-type: none"> • Basic to moderate knowledge in the use of mobile technologies • Will make purchases online if convenient • Generally, Prefers instore purchases • May, or may not have a PayPal account
Online Shopper – All Age Groups	<ul style="list-style-type: none"> • Aged: 18 – 65+ • Purchase Gifts and/or for themselves • Owns a Credit Card or Visa Debit Card • Lives in or know someone in 1 or more of the 20 deliverable locations • Owns a mobile device capable of running the application • Has internet access

Personas

From the information used to identify the application target user groups, two personas were generated as example users.

Names for the example users were randomly generated. **[Reference 3]**

Photos for example users were AI-Generated and are not photos of real people **[Reference 4]**

Penelope Ramirez		Winifred Gardiner	
			
Age:	20	Age:	34
Gender:	Female	Gender:	Male
Marital Status:	Single	Marital Status:	Married
Dependents:	None	Dependents:	Wife, 7-Year-old Daughter, 8-Year-old Son
Accommodation Status:	Lives with parents	Accommodation Status:	Mortgage
Backstory: "Penelope is a full-time University student studying a Bachelor of Information Technology at RMIT University and works part-time at the local newsagent."		Backstory: "Winifred is employed full-time as an "Information Security Engineer, Winifred travels 1 hr and 30min for work."	
Goals: Penelope is looking to get her mother a birthday present; a bracelet with an engraving "Your Loving Daughter"		Goals: Winifred's 10th anniversary is coming up and would like to find something special for his wife.	
		Frustrations: Winifred works long hours and has lots of	

<p>Frustrations: Penelope is a full-time university student and when not at university is busy working at the newsagent. Leaving her very little time to visit a store to browse for the gift.</p>	<p>meetings though out the day limiting the time he can spend looking for a Gift for his anniversary in person, stores within walking distance to his work don't have anything he likes.</p>
<p>Attributes:</p> <ul style="list-style-type: none"> • Highly knowledgeable in the use of mobile technologies • Owns a Credit Card or Visa Debit Card • Prefers to make purchases online 	<p>Attributes:</p> <ul style="list-style-type: none"> • Highly knowledgeable in the use of mobile technologies • Has a PayPal Account • Prefers Instore Purchases

Context Scenarios

Penelope Ramirez Scenario

Penelope's mother's birthday is in two weeks, she has a little spare time after getting home from the university before she must start her shift at the local newsagent near where she lives, so she decided to purchase some jewellery for her mother. She opens the "Jewelry Co Online" application on her phone and starts to look for a bracelet that she believes her mother would like.

After a few minutes she finds a popular item that her mother would like, she clicks on the item and is presented with options to customize the item with an engraving, she enters the text into the engraving field "Your Loving Daughter" the next field is Gift Box Message, she enters the text into the Gift Box Message "Its Your Birthday!" the final field is for the Gift Message Card, to which she enters the text "Dear Mum, Hope you enjoy the gift, Love you always, Penelope XOXOX".

Penelope then selects the "Checkout" button at the bottom of the app, the app responds by moving to the page "Delivery Information" Penelope is presented with 6 fields relating to the shipping destination of the gift, Penelope enters her mother's shipping information, the next question is related to whether she wishes to be anonymous or attach her information as who sent the gift, Penelope selects her details which the application already has attached to her profile and clicks on the "Continue" button.

Penelope must now review and confirm her order. Penelope is happy with the order and clicks on the "Proceed to PayPal" button. NOTE: this next task is taken care of by PayPal and not part of the application.

After the PayPal checkout is complete the application notifies Penelope that her order was successful and returns her to the main homepage of the application.

Winifred Gardiner Scenario

Winifred finds himself with a spare 20 minutes between meetings, with his upcoming anniversary and recent salary increase he decides to purchase his wife some jewellery and buy himself a new dress watch. He proceeds to open the "Jewelry Co Online" application on his smartphone and begins to browse for a necklace for his wife, after a few minutes he finds a necklace that he likes and that he believes his wife would like too, with a love heart pendant.

He selects the item on the application and is presented with options to customize the item with an engraving, he enters the text into the engraving field "W4J" (Winifred for Jane) the next field is Gift Box Message, He enters the text into the Gift Box Message "One decade down; forever to go" the final field is for the Gift Message Card, to which he enters the text "Since the first day we met I've been madly in love with you. Even after 10 years that love hasn't wavered for a second. Happy anniversary my amazing wife!".

Winifred then selects the "Add to Cart!" button, the application then sends him back to the applications main page and presents him with a confirmation message "Item Successfully Added to Your Cart!", Winifred selects "OK" to acknowledge the notification.

Winifred continues to browse for watches, after a couple of minutes makes his selection and he is presented with options to customize the item, as Winifred only wants to have an engraving on the watch, he only enters text into the engraving field; "Winifred Gardiner, 0412 321 321" leaving the remaining fields empty he clicks on the "Checkout" button.

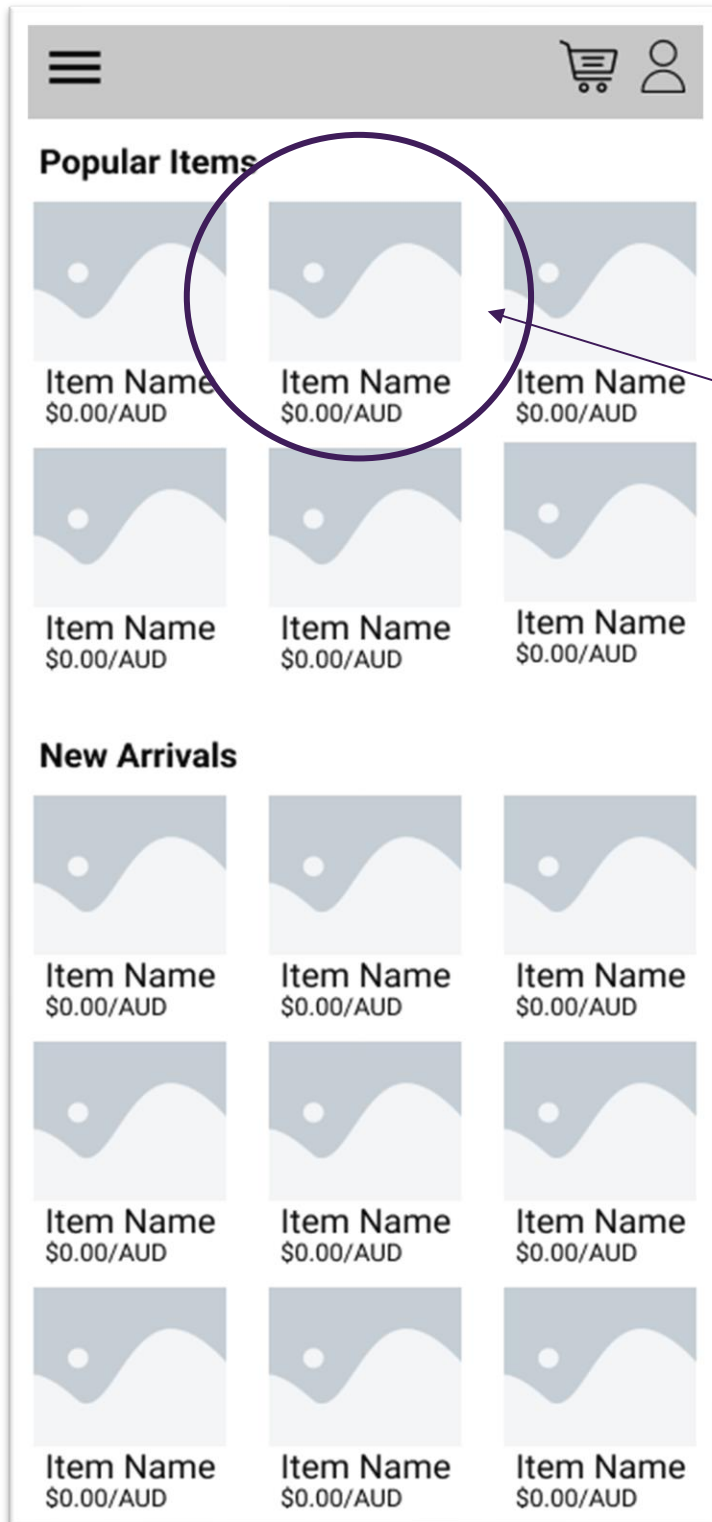
The app responds by moving to the page "Delivery Information" Winifred is presented with 6 fields relating to the shipping destination of the gift, Winifred enters his works shipping information so he can surprise his wife, the next question is related to whether she wishes to be anonymous or attach his information as who sent the gift, Winifred selects his details which the application already has attached to his profile and clicks on the "Continue" button.

Winifred must now review and confirm his order. Winifred is happy with the order and clicks on the "Proceed to PayPal" button. NOTE: this next task is taken care of by PayPal and not part of the application.

After the PayPal checkout is complete the application notifies Winifred that his order was successful and returns him to the main homepage of the application.

Key Path Scenarios

Penelope Ramirez Scenario)



1. Penelope Selects the Item she wishes to purchase for her mother

The image shows a mobile application interface for customizing a gift. At the top, there is a header bar with a hamburger menu icon on the left, a shopping cart icon in the center, and a user profile icon on the right. Below the header, the main content area is titled "Customize Your Item!". Under this title, there are three input sections: "Engraving:" with a text input field labeled "User Input Here", "Gift Box Message" with a text input field labeled "User gift box message input here", and "Gift Message Card:" with a text input field labeled "User card message input here". At the bottom of the screen, there is a dark gray bar containing three buttons: "Checkout", "Add to Cart!", and "Cancel". The "Checkout" button is circled in purple. Four numbered annotations on the right side of the screen describe the user's actions: 1. Penelope enters the "Engraving" text "Your Loving Daughter" (pointing to the engraving input field), 2. Penelope enters the "Gift Box Message" text "It's Your Birthday!" (pointing to the gift box message input field), 3. Penelope enters the "Gift Message Card" text "Dear Mum, Hope you enjoy the gift, Love you always, Penelope XOXOX" (pointing to the gift message card input field), and 4. Penelope clicks on the "Checkout" button (pointing to the checkout button).

Customize Your Item!

Engraving:

Gift Box Message

Gift Message Card:

Checkout
Add to Cart!
Cancel

1. Penelope enters the "Engraving" text "Your Loving Daughter"

2. Penelope enters the "Gift Box Message" text "It's Your Birthday!"

3. Penelope enters the "Gift Message Card" text "Dear Mum, Hope you enjoy the gift, Love you always, Penelope XOXOX"

4. Penelope clicks on the "Checkout" button

The form is titled "Delivery Information:" and contains six input fields: Name, Address Line 1, Address Line 2, State, Postal/Zip Code, and Country. Below these is a "Sender Information:" section with two radio button options. The first option is selected and contains the address: John Smith, U2 / 4 Doe Street, Horsham, Victoria, Australia, 3400. The second option is "Anonymous". At the bottom of the form are two buttons: "Continue" and "Cancel". The "Continue" button is circled in purple. Three purple arrows point from text boxes on the right to the form: one to the Name field, one to the selected address, and one to the "Continue" button.

Delivery Information:

Name:

Address Line 1:

Address Line 2:

State:

Postal/Zip Code:

Country:

Sender Information:

☒ John Smith
U2 / 4 Doe Street
Horsham
Victoria, Australia, 3400



☐ Anonymous

Continue
Cancel

1. Penelope enters her mother's shipping details in 6 supplied fields

2. Penelope selects her address rather than being anonymous

3. Penelope clicks on the "Continue" button



Confirm Order



Item Customized Details

Item Name
\$0.00/AUD

Deliver To:
Jane Doe
22 Hoddle Street,
North Richmond
Victoria, Australia
2754

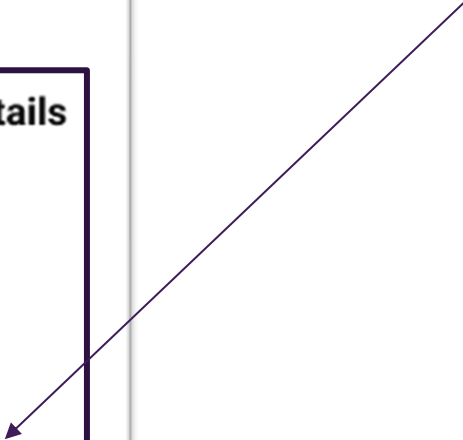
Sender Details:
John Smith
U2 / 4 Doe Street
Horsham
Victoria, Australia
3400

Proceed to PayPal

Back

Cancel

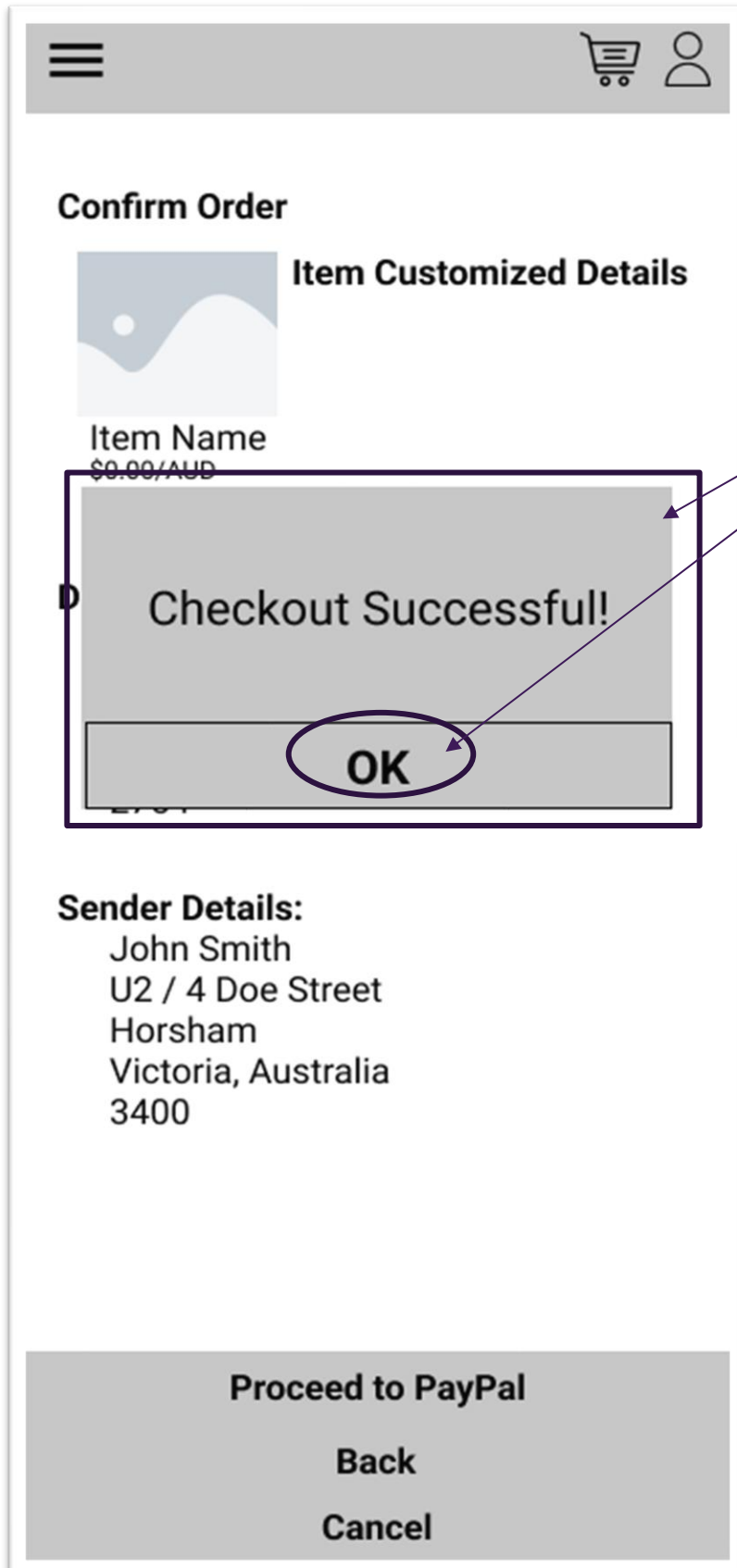
1. Penelope Reviews her Order



2. Penelope clicks the "Proceed to PayPal" button.

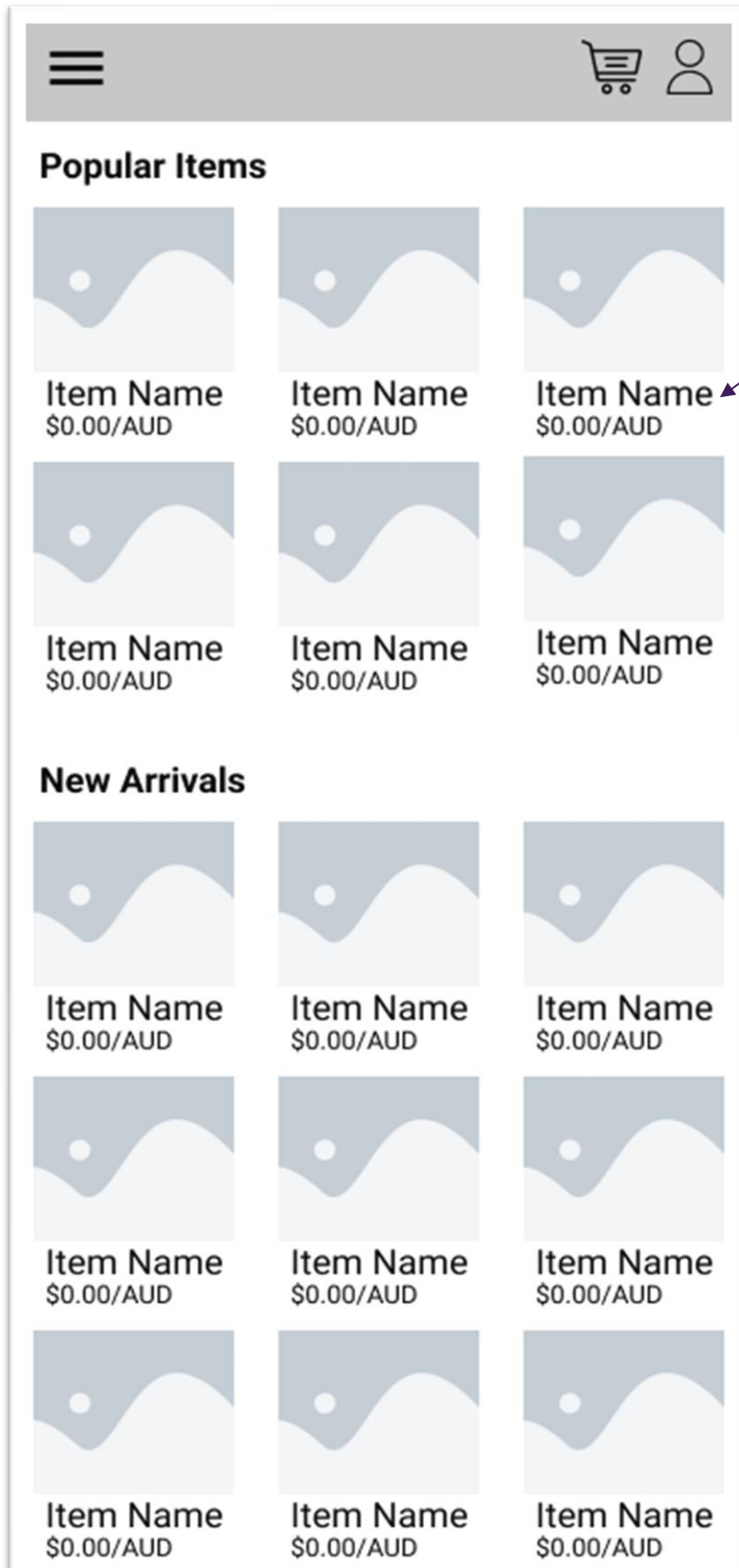
NOTE: This performs out of application tasks, that are not demonstrated here.





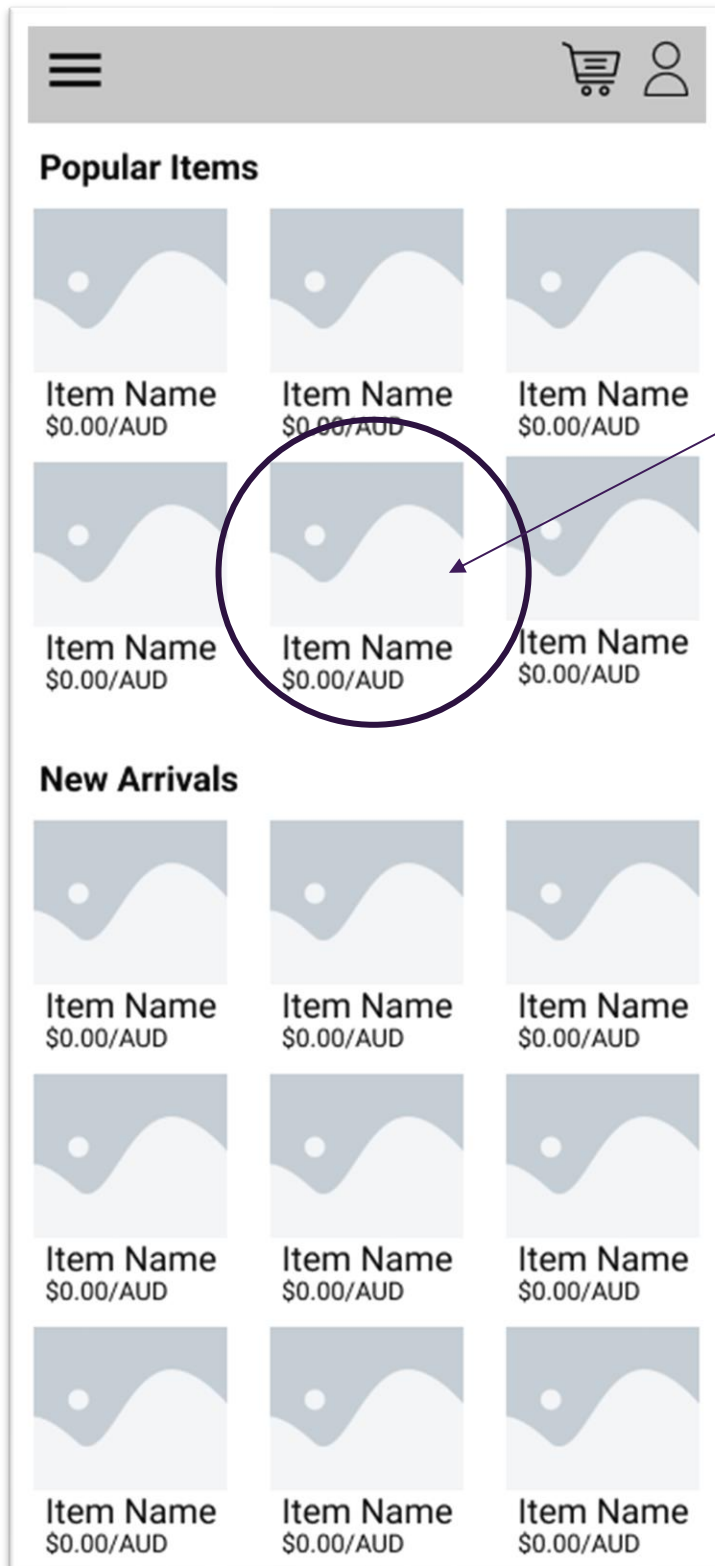
1. Penelope is returned from the "PayPal Checkout" to the application and presented with a confirmation dialog.

Penelope clicks the "OK" button



Penelope is then returned to the Main/Home page of the application.

Winifred Gardiner Scenario)



1. Winifred Selects the Item he wishes to purchase for his wife

The image shows a mobile application interface for customizing an item. At the top, there is a grey header bar with a hamburger menu icon on the left, a shopping cart icon in the center, and a user profile icon on the right. Below the header, the title "Customize Your Item!" is displayed. The main content area consists of three stacked sections, each with a title and a text input field. The first section is titled "Engraving:" and contains a text input field with the placeholder "User Input Here". The second section is titled "Gift Box Message" and contains a text input field with the placeholder "User gift box message input here". The third section is titled "Gift Message Card:" and contains a text input field with the placeholder "User card message input here". At the bottom of the screen, there is a grey footer bar with three buttons: "Checkout", "Add to Cart!", and "Cancel". The "Add to Cart!" button is circled in purple. Four purple arrows point from text boxes on the right to specific elements in the interface: the first arrow points to the "Engraving:" text, the second arrow points to the "Gift Box Message" text, the third arrow points to the "Gift Message Card:" text, and the fourth arrow points to the "Add to Cart!" button.

Customize Your Item!

Engraving:

Gift Box Message

Gift Message Card:

Checkout

Add to Cart!

Cancel

1. Winifred enters the "Engraving" text "W4J"

2. Winifred enters the "Gift Box Message" text "One decade down; forever to go"

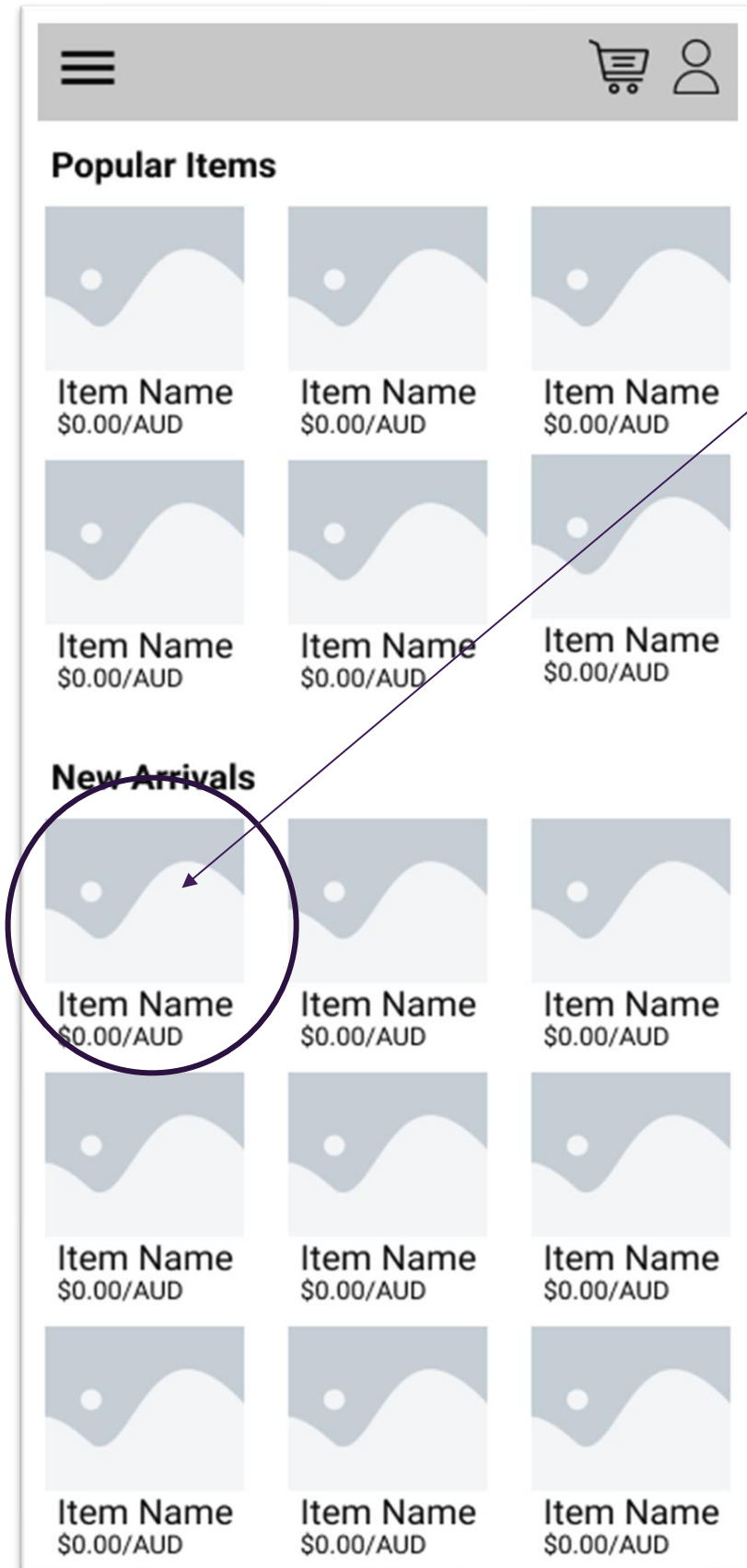
3. Winifred enters the "Gift Message Card" text "Since the first day we met I've been madly in love with you. Even after 10 years that love hasn't wavered for a second. Happy anniversary my amazing wife!". "

4. Winifred clicks the "Add to Cart!" button



1. Winifred is presented with a confirmation dialog confirming the item was added to the cart.

Winifred clicks on the "OK" button



1. Winifred Selects the Item she wishes to purchase for himself (Watch)

The image shows a mobile application interface for customizing an item. At the top is a grey header bar with a hamburger menu icon on the left, a shopping cart icon in the center, and a user profile icon on the right. Below the header, the title "Customize Your Item!" is displayed. The main content area contains three sections, each with a text input field:

- Engraving:** A text input field containing the placeholder text "User Input Here".
- Gift Box Message:** A text input field containing the placeholder text "User gift box message input here".
- Gift Message Card:** A text input field containing the placeholder text "User card message input here".

At the bottom of the screen is a grey bar containing three buttons: "Checkout", "Add to Cart!", and "Cancel". The "Checkout" button is circled in purple.

Four annotations with arrows point to specific elements:

1. Winifred enters the "engraving" text "Winifred Gardiner, 0412 321 321"
2. Winifred leaves the "Gift Box Message" text empty
3. Winifred leaves the "Gift Message card" text empty
4. Winifred clicks on the "checkout" button

The screenshot shows a mobile application interface for entering delivery information. At the top, there is a grey header bar with a hamburger menu icon on the left, a shopping cart icon in the center, and a user profile icon on the right. Below the header, the section is titled "Delivery Information:". This section contains a purple-bordered box with six text input fields: "Name:", "Address Line 1:", "Address Line 2:", "State:", "Postal/Zip Code:", and "Country:". To the right of this box, a callout box with the text "1. Winifred enters his works shipping details in 6 supplied fields" has two arrows pointing to the "Address Line 1:" and "Address Line 2:" fields. Below the "Delivery Information:" section is the "Sender Information:" section. It contains two radio button options. The first option is selected, with a callout box pointing to it containing the text "2. Winifred selects his address rather than being anonymous". The selected option is "John Smith", "U2 / 4 Doe Street", "Horsham", "Victoria, Australia, 3400". The second option is "Anonymous". At the bottom of the form is a grey bar containing two buttons: "Continue" and "Cancel". The "Continue" button is circled in purple, and a callout box points to it with the text "3. Winifred clicks on the 'Continue' button".

Delivery Information:

Name:

Address Line 1:

Address Line 2:

State:

Postal/Zip Code:

Country:

Sender Information:

☒ John Smith
U2 / 4 Doe Street
Horsham
Victoria, Australia, 3400

☐ Anonymous

Continue

Cancel

1. Winifred enters his works shipping details in 6 supplied fields

2. Winifred selects his address rather than being anonymous

3. Winifred clicks on the "Continue" button

The image shows a mobile application screen for confirming an order. At the top, there is a grey header bar with a hamburger menu icon on the left, a shopping cart icon in the center, and a user profile icon on the right. The main content area is titled 'Confirm Order' and contains two identical item entries. Each entry features a placeholder image, the text 'Item Customized Details', 'Item Name', and '\$0.00/AUD'. Below these items, the 'Deliver To:' section lists the address: Jane Doe, 22 Hoddle Street, North Richmond, Victoria, Australia, 2754. The 'Sender Details:' section lists: John Smith, U2 / 4 Doe Street, Horsham, Victoria, Australia, 3400. At the bottom, there is a grey bar with three buttons: 'Proceed to PayPal' (circled in purple), 'Back', and 'Cancel'. Two purple arrows point from external text boxes to the 'Item Customized Details' and the 'Deliver To:' address. A third purple arrow points from a text box to the 'Proceed to PayPal' button.

Confirm Order

Item Customized Details

Item Name
\$0.00/AUD

Item Customized Details

Item Name
\$0.00/AUD

Deliver To:
Jane Doe
22 Hoddle Street,
North Richmond
Victoria, Australia
2754

Sender Details:
John Smith
U2 / 4 Doe Street
Horsham
Victoria, Australia
3400

Proceed to PayPal




Back

Cancel

1. Winifred reviews his order

2. Winifred clicks the
"Proceed to PayPal" button.

NOTE: This performs out of
application tasks, that are
not demonstrated here.



Confirm Order



Item Customized Details

Item Name
\$0.00/AUD

Item Customized Details

Checkout Successful!

OK

22 Hoddle Street,
North Richmond
Victoria, Australia
2754

Sender Details:
John Smith
U2 / 4 Doe Street
Horsham
Victoria, Australia
3400

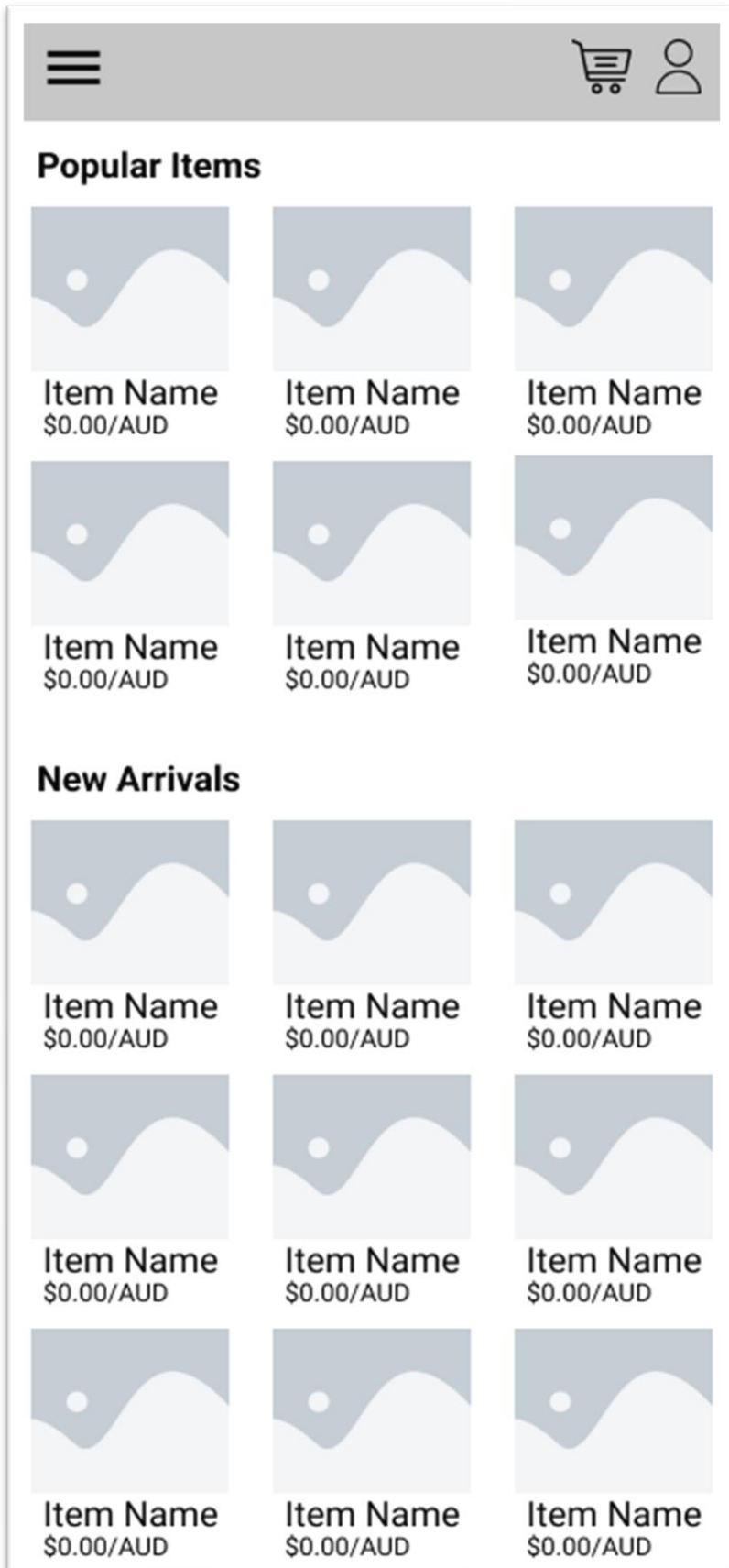
Proceed to PayPal

Back

Cancel

1. Winifred is returned from the "PayPal Checkout" to the application and presented with a confirmation dialog.

Winifred clicks the "OK" button



Winifred is then returned to the Main/Home page of the application.

Design Principles

This section covers the design principles used in the prototype of the application “Jewelry Co Online”.

Layout

The layout of the application will remain the same throughout the entire application in particular the top navigation bar remains in place, with the hamburger menu for complex menu navigation in the top left, the short cut icons for the cart and the user profile remaining in the top right.

Progression and degression buttons when required will always exist on the bottom of the application; buttons such as the back, cancel, checkout, proceed to PayPal; will always be in this location, similar to many other applications.

Keeping the layout of the application consistent thought out the entire application shortens the learning curve for the end-user, keeping the application layout similar to other industry-leading applications and adopting conforming practices from competing applications the user more than likely has had experience with will also dramatically decrease the learning requirement of the end-user.

We don't want the user to think; about how to use the application, we simply want them to buy customized jewellery, fast!

Always Return Home or Step Back

When the user navigates deeper into the application, they are given two buttons depending on the depth of their current task, the first button is “Cancel” which cancels the current task and returns the user to the homepage quickly.

The second button is the “Back” button which simply steps them backwards to the previous step that required their input in the current task, this is useful if they only want to make a minor change rather than start over from the beginning which may frustrate some users.

Notifications

Notifications are presented to the user to reassure them that the task they were performing was completed successfully or that in the unfortunate situation that it failed and why. Rather than leaving the user wondering if it worked or not.

Visual Appearance

The visual appearance of the application ideally should seem to the end-user as uncluttered and clean; this is accomplished by “balancing” the visual space so that content is evenly distributed in the view of the user. A vibrant but not intense colour scheme also assist in this.

As the application main focus is selling jewellery we need to ensure the selected colour scheme doesn't preoccupy the user's attention, and that their focus is solely on the jewellery that is being sold in the application.

References:

- **Reference 1 – [Online] Jewelry Ecommerce Statistic and Insights:**
<https://blog.clear.sale/jewelry-e-commerce-statistics-and-insights> [Accessed: 01/02/2022]
- **Reference 2 – [Online] Online Jewelry Sales Statistics (2011-2022):**
<https://www.oberlo.com/statistics/online-jewelry-sales-statistics> [Accessed: 05/02/2022]
- **Reference 3 – [Online] Quick Name Generator:**
<https://www.name-generator.org.uk/quick/> [Accessed: 01/02/2022]
- **Reference 4 – [Online] ThisPersonDoesNotExist - Random AI-Generated Photos of Fake Persons:**
<https://this-person-does-not-exist.com/en> [Accessed: 01/02/2022]