Thesis/Capstone Proposal No. 1

BSCS-4A

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The Development of Augmented Reality Wrist Watch Ordering Management System using Unity and Visual Code

PROJECT CONTEXT:

General Objective:

To develop an Augmented Reality Watch Store, a browser-based and Android app that allows users to order a variety of watches and select their preferred wrist watch, preview and experience putting on a watch in real-time in their own environment, organizing brands and price range, and create the summary of sales within the day.

Specific Objectives:

- 1. To create a user's account and record the user's personal information such as name, age, gender, and address.
- 2. To filter products in terms of brands, variants, and price range depends on the preference of the user.
- 3. To accept the selected product of the user and produce proof of purchase that includes product name, quantity and total price.
- 4. To provide an android application that allows users to preview the chosen product using Augmented Reality.
- 5. To display and print the summary of total sales within the day statistically and graphically.

Scope:

- 1. The system can add, update, display and delete products.
- **2.** The system will provide product sorting to organize wrist watches in terms of brands, variants and price range.
- 3. The system allows users to select their chosen wrist watch and add it into the cart.
- **4.** The system will provide a proof of purchase after successful payment.
- **5.** The system will provide an android application that projects a 3D model of chosen watch into their wrist using Augmented Reality application.
- 6. The system will display the real-time overview of the important data into the dashboard such as the total sales, quantity of the product, and total registered users.
- 7. The system will be able to print a softcopy of the items sold, total sales, user successful orders.

Limitation:

- 1. The brands and variants of wrist watches are only limited.
- 2. You need an account first before you make a transaction.
- **3.** The application needs a white paper bracelet provided in the system to project the augmented reality on your wrist clearly.
- **4.** The application is exclusive only for Android with Oreo version.

Detailed Functionalities including the users:

- **1. Inventory Management -** The facilitator will be able to add, update, display and remove products.
- **2. Product Sorting -** Where the user will be able to filter the product in terms of brands, variants and price range.
- **3. Order Management -** The facilitator will be able to monitor the user order activity and fulfill customers' orders.
- **4. Augmented Reality The** user will be able to see the actual product in their wrist using Augmented Reality by projecting a 3D model of the product in real time.
- **5. Dashboard -** Where the facilitator will be able to monitor the overview of the important data such as the graphs, total sales, quantity of the product, and total registered users.
- **6. Sales Report -** The facilitator will be able to print a softcopy of the reports such as the total item sold, total sales, and user successful orders.
- 7. **Purchase** The users will be able to purchase their selected product.

Budget:

Expenses	Pricing Per Month	Fee
Allowance	PHP 15,000	PHP 150,000
Domain Hosting	PHP 249	PHP 2,490
Electricity	PHP 1,500	PHP 15,000
Internet Access	PHP 2,100	PHP 21,000
TOTAL		PHP 188,490

Model of the device/s included in the proposed project / Prototype (XD / Figma)

	Desktop and Laptops	Mobile Phones and Tablets
Operating System	Windows 8 or later	Android Pie 9.0 or later
RAM	8 GB	8 GB
Network Speed	> 25 MBPS	> 25 MBPS

Minimum Desktop or Laptop Hardware Requirements:

- Operating System: Windows 7, Windows 8, Windows 8.1, and Windows 10
- **RAM** 4 GB
- Network Speed: At least 15 mbps of download speed and 10 mbps or upload speed

Minimum Mobile Phones or Tablet Hardware Requirements:

- Operating System: Android Oreo 8.0
- **RAM** 4GB
- Network Speed: At least 15 mbps of download speed and 10 mbps or upload speed

Software

Web Browser: Latest version of Google Chrome or Microsoft Edge.

Figma Design:

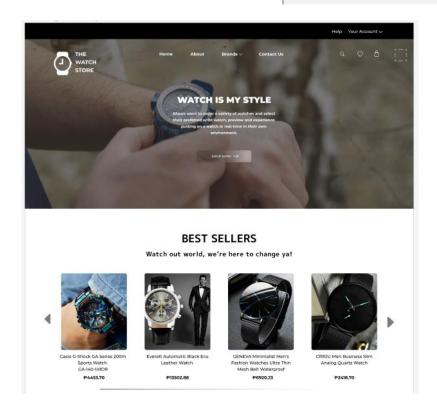


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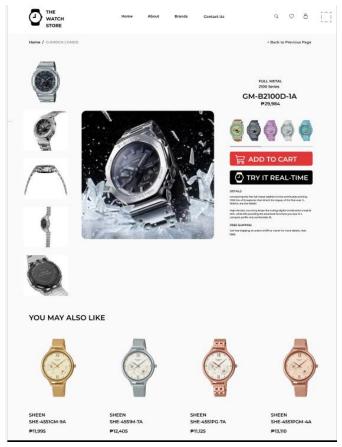


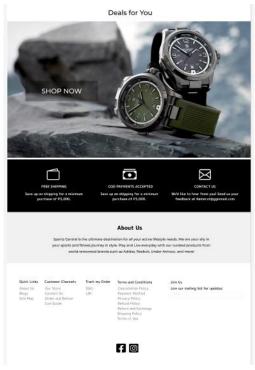
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IPO diagram (Input – Process – Output)

INPUT	PROCESS	OUTPUT
Unity Visual Studio Code Go Daddy Mobile Phone Blender Xampp(Localhost)	Agile Method Requirements Phase Design Phase Development Phase Testing Phase Deployment Phase Review Phase	The development of Augmented reality wrist watch ordering management system using unity and Visual Code

REASON(s) / JUSTIFICATION(s) IN CHOOSING THE PROJECT:

In today's generation where e-commerce became popular and more accessible in different parts of the world. E-commerce played a vital role in our generation, especially when the pandemic struck and it helped us to buy our necessities without going to physical stores that was prohibited at the time.

But, many have a fear of buying products especially on online platforms because the product in the pictures may not be the same as the actual product received by the customer. To improve this problem, we will develop an Augmented Reality application that will help users to see the actual product by projecting the item in real-time and assist them in making a purchasing decision.

- Pokémon GO
- AR Kids
- Wanna Kicks
- AR Real Driving
- AR Furniture App

These applications inspired us to pursue this project. Augmented Reality has become popular after the release of Pokémon GO and other applications that use AR. This gives us the idea of having new marketing opportunities, integrating Augmented Reality in Online Store or shop will grab the attention of users. By implementing this feature, users will not only enjoy the experience of shopping online but they will actually see the product without going to a physical store.

EXPECTED CONTRIBUTIONS TO THE GROWTH OF KNOWLEDGE IN INFORMATION TECHNOLOGY:

The innovation we introduce into our project is the use of Augmented Reality. This will assist users in selecting their desired product by projecting 3D images of their chosen watch into their wrist. By implementing this feature, users will not only enjoy the experience of shopping online, but they will also gain trust in the system, and hopefully would buy again.

Our project can also contribute to a starting ecommerce business and find success by selling products that incorporate Augmented Reality. The project will allow customers to virtually try on and test products all through an electronic device. AR helps customers feel like they are in a physical store interacting with actual products.

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