

Online Activity No. 8 and 9: Applying the User-Centred System Design Process

Objective

1. Innovate an existing interactive system and computer technology.
2. Perform and apply UCSD.

Materials

- Personal computer
- Any software for (Computer aided designs) or programming language

Background

Atakan(2006), UCSD is used in the design process. Reasons are evaluated why traditional-technology-focused design processes may result in unusable systems-and the consequences of those unusable or useless systems. This leads directly to a consideration of the different methodologies that go to make up a user-centered system design process.

Procedure

- a.) Identify a scope or agenda
- b.) Format for the document is given below as guide for the designers in the making the output both the document and design.

Chapter I. Introduction

Background of the study

In general, organizations across various sectors require designated personnels in order to manage and confirm appointments. However, in today's modern world, people continuously shift from one activity to another. As such, the demand for efficient scheduling and real-time updates grows exponentially and has become essential; hence, it necessitates automated systems as opposed to man-operated systems that are in need of time, effort, and resources. Given the kind of speed that operations and businesses need in the contemporary, there is little to no room for errors—corrections can be tedious to correct, and could lead to customer dissatisfaction. Implementing an appointment system mitigates these challenges. By alleviating these shortcomings, both business operations could be enhanced, and increases customer satisfaction.

Locally, businesses such as salons, clinics, and service providers struggle to effectively manage appointments. Currently, the expanding jewelry business manages appointments. Currently, the expanding jewelry business Jewelry Express Goldsmith and Tools Supply uses manual record-keeping and conventional scheduling techniques like phone calls. These old methods often lead to inefficiencies, delay, and even hinder administrative work. The business needs a digital booking platform that guarantees real-time availability, and automated reminders. This allows both sides to have better time management in order to increase productivity and improve customer experience.

Jewelry Express was created to bridge this gap by offering a simple online platform for viewing, personalizing, and purchasing jewelry. The system intends to improve the shopping experience for clients, particularly students and young professionals, by providing features such as product listings, appointment scheduling for custom items, and safe transactions. By becoming digital, Jewelry Express increases visibility, improves customer service, and allows users to browse jewelry selections from the comfort of their own home.

Statement of the problem

1. **There is an inefficient appointment scheduling system for customers.**
Customers currently face difficulty when trying to book appointments or consultations with Jewelry Express, as there is no streamlined or automated scheduling feature available. This leads to manual coordination, delays in communication, and missed booking opportunities, especially during peak hours or promotional events.
2. **The platform has limited market reach and customer engagement.**
Jewelry Express currently struggles to attract and retain a broader audience due to the absence of interactive features such as customer accounts, product recommendations, and feedback options. Without these tools, the system fails to create a personalized shopping experience, resulting in lower customer retention and engagement rates.
3. **There is a lack of efficient business operations and inventory management.**
The existing system does not offer real-time inventory updates, making it difficult for staff to monitor stock levels, manage orders, and update item availability. This leads to errors in product listings, potential overbooking, and missed sales due to items being shown as available when they are not.

Assumption of the study

The proposed Jewelry Express interactive system is expected to address the key issues identified in the current setup by introducing specific features designed to improve functionality and user experience.

- To address the inefficient appointment scheduling system, the platform will include an automated booking feature that allows customers to conveniently schedule consultations or appointments. This system will provide available time slots, send confirmation notifications, and reduce the need for manual coordination, ensuring faster and more reliable service.
- To improve market reach and customer engagement, the system will integrate user accounts, personalized product recommendations, and a feedback mechanism. These features are intended to enhance user interaction, encourage repeat visits, and create a more engaging shopping experience tailored to individual preferences.
- To solve the lack of efficient business operations and inventory management, the system will feature a real-time inventory tracker that updates product availability as purchases and restocks occur. This ensures accurate listings, minimizes customer frustration due to unavailable items, and allows for better stock control and sales forecasting.

Through these features, the proposed system aims to significantly improve operational efficiency, user satisfaction, and business growth for Jewelry Express.

Significance of the study

1. Business Owner
 - The system helps the owner track sales, inventory, and appointments in real-time, making it easier to manage the business.
2. Store Managers
 - Managers can monitor staff, customer bookings, and stock levels in one place, helping them run the store smoothly.
3. **Sales Staff**
 - Staff can focus more on helping customers since the system will handle tasks like booking and inventory updates.
4. Inventory Staff
 - The system updates stock automatically, making it easier to check which items need restocking.
5. Marketing Team
 - The system gives useful customer data that helps the team create better promotions and campaigns.
6. Customers
 - Customers can easily book appointments, view jewelry items, and have a smooth and convenient shopping experience.

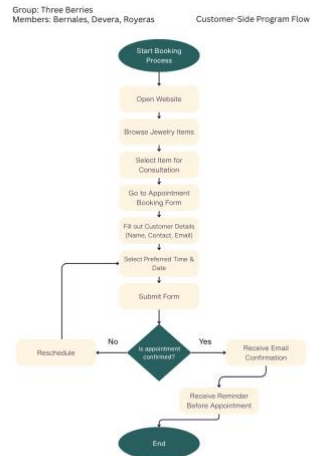
Chapter II. Research Design

The group should be able to identify here the steps of the design process model used and its corresponding description from the reference book. Aside from it, the researchers should also relate their own experiences and add it into the description of every stage of the design process model.

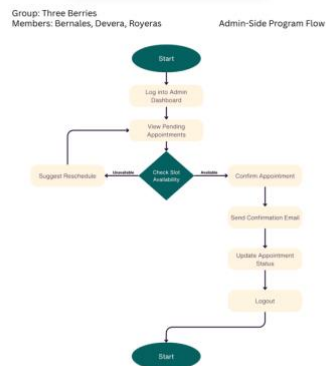
User – Centered System Design Process

A. Task Analysis

- Customer Side:
 1. Open website.
 2. Browse jewelry items or services.
 3. Select item or service for appointment.
 4. Go to appointment booking form.
 5. Fill out important details (name, contact details, email, etc.).
 6. Submit form.
 7. If the appointment is rejected, reschedule. Otherwise, you will receive a confirmation email.
 8. Go to appointment.



1. Open Website
2. Login into admin dashboard.
3. View status of customers' bookings.
4. Check the available time slots.
5. Depending on the availability, either accept or decline the booking.
6. Send notification.
7. Update the status.
8. Repeat the process if needed.
9. Logout.



B. Requirements Gathering

This section discusses how the group gathered the necessary data needed for the proposal. Some of the common methods are as follows: Explain how each method was utilized by the group and fit according to your own experience while doing data gathering.

Interview

The team conducted structured interviews with a total of 28 individuals, which included 12 employees (among them 2 sales associates) and the sole proprietor, as well as 15 long-

time clients of Jewelry Express. Interviews were held within the business premises over the course of one week, with each session lasting between 10–15 minutes.

Discussions with the employees focused on appointment handling, customer interactions, workflow bottlenecks, and limitations of the current manual scheduling system. The sole proprietor provided insights on business scalability concerns, operational overhead, and missed growth opportunities due to lack of digital tools. Meanwhile, clients were asked about their experience booking consultations, preferences for product browsing, and thoughts on improving accessibility.

Findings revealed that:

- 92% of employees found the manual appointment tracking process to be time-consuming and prone to double bookings.
- 87% of clients expressed interest in a website-based appointment feature, citing convenience and flexibility.
- The proprietor emphasized the need for a system that reduces their dependence on manual client follow-ups and improves appointment visibility and documentation.

Survey/Questionnaire

A digital and printed questionnaire was distributed to a total of 40 participants, including 20 employees (again, including the 2 sales associates and 1 sole proprietor) and 20 clients of Jewelry Express. The survey consisted of 12 close-ended questions and 3 short open-ended items, focusing on user behavior, digital familiarity, pain points, and feature preferences for the proposed system.

The response rate was 100%, and key insights included:

- 95% of employees agreed that a centralized digital platform would greatly ease appointment tracking.
- 80% of clients reported difficulty contacting the store during business hours, expressing preference for 24/7 appointment access.
- 90% of all respondents stated they would be more likely to engage with a business that had an organized, professional website that reflected its quality services.
- When asked about reminders, 85% of clients said they would appreciate automated text or email notifications for their appointments.

These responses helped reinforce the decision to incorporate features like a user-friendly booking interface, categorized jewelry display, and automated notifications.

Observation

To support the development of the Jewelry Express Online Appointment System, the team conducted structured observations of **10 employees** and **10 clients** over a period of two weeks. These observations took place during regular store hours and focused on real-time interactions such as booking consultations, handling jewelry inquiries, and managing

appointment schedules. All participants gave consent, and the team recorded the sessions using structured checklists and field notes.

From a **user perspective**, it was observed that clients often wished to book appointments independently without relying on direct phone calls or visiting the store in person. They also wanted a clear view of available time slots and expressed the need for booking confirmations and reminders. On the employees' side, it became evident that they required a centralized calendar system that would help them avoid overlapping schedules and miscommunication.

In terms of **functional requirements**, the system must allow users to view available appointment dates and times, select a specific jewelry item or service, and submit their appointment request for confirmation. For the admin users, it must provide the ability to view and manage appointments, particularly tracking those that are pending, confirmed, or canceled.

Regarding **data requirements**, the system should securely store and retrieve relevant information, such as customer names, contact details, appointment dates and statuses, and jewelry item information like name, type, material, and image. Observers noted the importance of keeping this data organized and easily accessible for tracking, documentation, and customer follow-ups.

The **environmental requirements** became clear through repeated interactions: the system must be functional across commonly used devices, such as smartphones, tablets, and desktops. It must also work efficiently even in low-bandwidth environments, as many clients use mobile data connections. Ensuring mobile responsiveness was seen as essential, given that a majority of observed customers interacted with the business through their mobile phones.

With regard to **usability**, the interface must be simple, visually clear, and accessible to users who may not be tech-savvy. Observations showed that customers preferred a process that could be completed in just a few steps, ideally within three to five interactions. Immediate feedback (such as "appointment successfully booked") was also identified as a must-have feature to keep users informed and reassured throughout their experience.

Finally, the **designer requirements** were informed by the brand's premium identity. The interface must reflect the elegance and quality that Jewelry Express is known for, which means that each button, form, and label must be thoughtfully placed to ensure a clean and cohesive user experience. The design should be intuitive, visually appealing, and consistent across both the customer-facing and admin-facing views of the system.

C. **Storyboarding and Prototyping**

The storyboard perfectly captures the essence of Jewelry Express's purpose: to book an appointment with ease; at the same time, offering a seamless, efficient, and stress-free environment both for clientele and Jewelry Express's employees.



Sofia was notified about her upcoming anniversary with her girlfriend. However, upon browsing the internet, she found about Jewelry Express.



As she browsed through the selection, she immediately found the perfect jewelry she desired to give to her dear beloved. Awesome!



She got an appointment fast! And she did not even had to exert an effort to go through the physical store, and wait for someone to entertain her. Easy as pie.



The admin immediately saw of this appointment, and decided that this day would be an excellent day to discuss with Sofia about the jewelry! Accepted immediately.

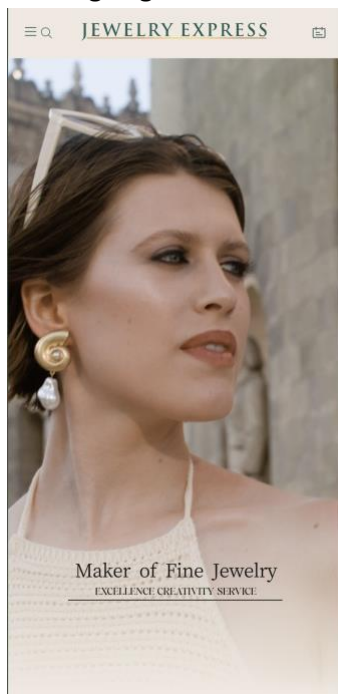


On her appointment day, everything's ready—no confusion, no delays.

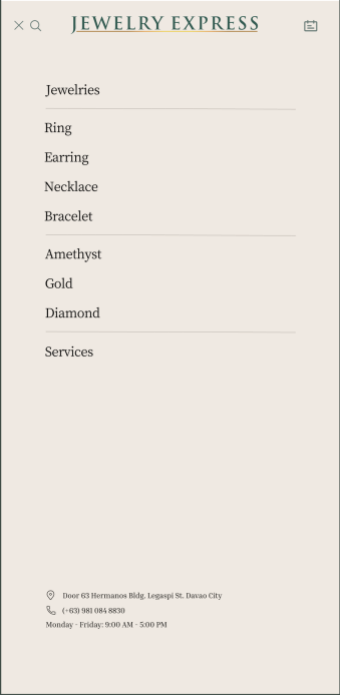


Sofia happily holds the wrapped jewelry box. Thanks to the booking system, she found the perfect gift—stress-free

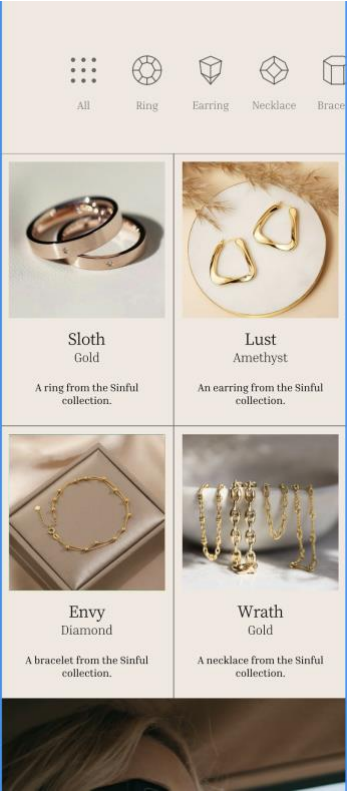
Landing Page



Menu Bar



Jewelry Selection



Book an Appointment Details

JEWELRY EXPRESS

Book an Appointment



Amore

Gold

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Resizing

Consultation

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Full Name

Write your name here...

Contact Number

Write your number here...

Email

Write your email here...

Describe your purpose

Write your description here...

<March 2025>

SUNMONTUEWEDTHUFRI SAT

1234567

891011121314

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22232425262728

293031

Describe your purpose

Write your description here...

<March 2025>

SUNMONTUEWEDTHUFRI SAT

1234567

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Available Time

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Confirm

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Customer Care

Confirm Details

JEWELRY EXPRESS

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Confirm Details

March 15, 2025

WED - 9:30 AM - 10:30 AM

Full Name

Janelle Joyce

Contact Number

(+63) 981 084 8830

Email

nelly@gmail.com

Appointment Type

Consultation

Purpose

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Submit

Admin Side Dashboard

JEWELRY EXPRESS

ADMIN

Welcome, Admin!

Dashboard

Appointments

Products

Sign Out

Recent Appointments

This Day7

This Week12

This Month20

Upcoming Appointments

This day

Customer	Schedule	Purpose	Date Appointed
Last name, First name	Jun 29, 2004 9:30 AM	Buy	Jun 14, 2004
Last name, First name	Jun 29, 2004 9:30 AM	Buy	Jun 14, 2004
Last name, First name	Jun 29, 2004 9:30 AM	Buy	Jun 14, 2004
Last name, First name	Jun 29, 2004 9:30 AM	Buy	Jun 14, 2004
Last name, First name	Jun 29, 2004 9:30 AM	Buy	Jun 14, 2004
Last name, First name	Jun 29, 2004 9:30 AM	Buy	Jun 14, 2004
Last name, First name	Jun 29, 2004 9:30 AM	Buy	Jun 14, 2004

Admin Accept Confirm Appointment

D. Evaluation of prototype

Use heuristic evaluation with format given below. This is the criteria of how the design will be graded. **(Select the best design among 3 to 5 alternative designs within your team and evaluate)**

Evaluation Criteria (Based on the 10 heuristics of design evaluation)

Area of Evaluation	5	4	3	2	1
A. Visibility of System Status - The system design provides appropriate feedback like message prompts in response to user actions. - The message prompts are clear, visible and understandable.	x				
	x				
B. Match between the system and the real world - Used words, phrases and concepts according to users' language rather than system oriented words and computer jargons.	x				
C. User control and freedom - The system design provides ways of allowing users to easily "get in" and "get out" if they find themselves in unfamiliar parts of the system.	x				
D. Consistency and Standards - The colors, text, labels, buttons and other elements in the design are uniform from start to finish. - Text and icons are not too small or too big. - Menus and other features of the system are arranged and positioned in a consistent way. (For ex. If your website has navigation buttons on the top under the page title on one page, the users will automatically look there for the same features on other pages.	x				
	x				
	x				
E. Error Prevention - The system design provides an automatic detection of errors and preventing them to occur in the first place. - Idiot proofing mechanisms are applied		x			
		x			
F. Help users recognize, diagnose and recover from errors - Error messages and the terms used are recognizable, familiar and understandable for the users.	x				
G. Recognition rather than recall - Objects, icons, actions and options are visible for the user. - Objects are labeled well with text and icons that can immediately be spotted by the user and matched with what they want to do.	x				
H. Flexibility and efficiency of use - The system design provides easy to navigate menus.	x				

- the system does not make wasteful time of system resources.					
I. Aesthetic and minimalist design -Graphics and animations used are not difficult to look at and does not clutter (mess) up the screen. - Information provided is relevant and needed for the system design.	x				
J. Help and Documentation -the system design provides information that can be easily searched and provides help in a set of concrete steps that can easily be followed.			x		

Chapter III. Conclusion and Recommendation

The development of “**The Gilded Hour: Jewelry Express’s Online Appointment System**” reflects a thoughtful response to the growing need for efficiency and automation in service-based businesses. As discussed in Chapter I, the current manual operations of Jewelry Express—such as phone-based appointment bookings and handwritten records—pose serious limitations in terms of time, accuracy, and customer satisfaction. Through the creation of this interactive platform, the group designed a solution that not only addresses these operational inefficiencies but also enhances client interaction and strengthens Jewelry Express’s digital presence.

The design of the system offers targeted solutions to the three major problems identified: the lack of an efficient appointment scheduler, limited customer engagement, and poor inventory tracking. The **automated booking system** significantly reduces manual coordination, eliminates overlapping schedules, and provides clients with instant confirmation and reminders. Meanwhile, the addition of a **jewelry catalog and product selection feature** enhances the shopping experience, increasing engagement, especially among younger, tech-savvy customers. Lastly, by integrating features that can support **inventory visibility and service management**, the business gains better control over daily operations.

From a Human-Computer Interaction perspective, this project emphasized the importance of designing not only for function but also for **clarity, accessibility, and intuitive user flow**. Every UI element was deliberately placed with the end user in mind, ensuring that both clients and admins can interact with the system seamlessly. The experience of developing this system taught the researchers that effective HCI design involves empathy—understanding what the user needs, what they expect, and how they behave in real-world situations. Creating a platform that solves problems while remaining visually elegant and user-friendly is at the heart of good interaction design.

Recommendations

- **Continuous Feedback Loop:** It is recommended that the system integrates a built-in feedback feature to allow customers to share their experiences, enabling continuous improvement of service quality and user experience.
- **Future Scalability:** The platform should be designed for easy expansion, such as adding **online payment integrations, client accounts, or chat support** as the business grows.

- **Regular Testing and Updates:** Conduct usability testing periodically to ensure the platform continues to meet customer needs and remains compatible with evolving devices and browsers.
- **Staff Training:** Provide orientation and training for all employees to ensure smooth adoption of the system and to reduce resistance to change.
- **Data Security Measures:** As the system handles client data and potentially sensitive appointment information, it is recommended to integrate encryption and user authentication protocols.

In conclusion, this project showcases how a well-thought-out digital solution can transform traditional workflows into efficient, modern systems. By applying both technical and HCI design principles, the Jewelry Express Online Appointment System not only resolves existing issues but also opens new opportunities for growth, engagement, and customer satisfaction.