**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 why it 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**

1. Identify a scope or agenda
2. 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**

The Philippines' hotel sector has substantial obstacles with its current reservation systems, which may be divided between automated and manual methods. Although manual methods provide individualized service through in-person encounters, they can lead to inaccuracies and time-consuming procedures. Although automated methods are more effective, they may cause confusion for users and give the impression of being impersonal. The creation of INNDOORS, a mobile application intended to expedite and improve the reservation process for hotels, flats, and villas around the Philippines, was prompted by the need for a user-friendly, efficient booking system that incorporates the best features of both strategies.

**Statement of the problem**

The current booking systems for accommodations face several issues:

* There is a considerable time delay in searching for available rooms or spaces.
* Users need help navigating through complex and cluttered interfaces.
* Inconsistent terminology within the system causes confusion.
* Customizable search options are necessary to maintain efficiency.
* Users are not provided with a comprehensive summary before finalizing their bookings, leading to errors.

**Assumption of the study**

The proposed INNDOORS application aims to solve the identified problems through the following features:

* A simple, easy-to-use interface that speeds up both the booking and search processes.
* The software uses clear, understandable language throughout.
* Adaptable search parameters to improve efficiency and user control.
* A summary page that gives a rundown of the reservation prior to its final submission.
* enhanced error guidance and comprehensive error messages for users.
* These improvements are intended to successfully solve the shortcomings in the present system.

**Significance of the study**

The proposed INNDOORS system will benefit various stakeholders:

* **Users**: The booking procedure will be quick and easy for them, which will save them time and a hassle. Increasing customer happiness can result in more repeat business and loyalty.
* **Accommodation Providers**: Because of the expedited booking procedure, they may anticipate increased occupancy rates and better customer satisfaction. Revenue growth and improved resource management may result from this.
* **Developers**: The design serves as a framework for next projects and serves as a blueprint for making user-friendly apps. Developers learn about the best ways to combine individualized care with automated efficiency.
* **Administrators**: By reducing the complexity and duration of bookings, they free up time for other important responsibilities that improve overall operational efficiency. Other advantages include decreased manual labor and increased data accuracy.

**Chapter II. Research Design**

*User – Centered System Design Process*

The design process model used for developing INNDOORS consists of several key stages:

1. **Task Analysis**

The suggested design was subjected to a hierarchical task analysis to determine each step users needed to take to finish a booking. This analysis makes sure that every user demand is adequately addressed in the design. We can identify areas for development and make sure that the system assists users at every level by decomposing the booking process into individual activities. This technique aids in comprehending user behavior, locating any problems, and designing an interface that is easier to use.

1. **Requirements Gathering**

The following techniques were applied to collect the information required for the proposal:

* Google Forms survey: Disseminated to a large audience to collect quantitative data on user concerns and preferences.
* Heuristic Evaluation: A process used to find usability problems based on Nielsen's ten heuristic principles.
* The app's efficacy, efficiency, engagement, error tolerance, and simplicity of use were evaluated using the 5Es.

1. **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** |
| 1. **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 |  |  |  |  |
| 1. **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 |  |  |  |
| 1. **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 |  |  |  |  |
| 1. **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 |  |  |  |
| 1. **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.  - the system does not make wasteful time of system resources. | X |  |  |  |  |
| 1. **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 |  |  |  |  |
| 1. **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 assessment of the INNDOORS mobile application has yielded significant knowledge for improving user experience and operational effectiveness. Standardizing vocabulary and iconography throughout the interface ensure consistency and makes navigating easier, which is essential for improving usability. To help users understand, essential elements like the payment procedures and reservation data should have more visual clarity. Personalized elements like remembered preferences may increase user engagement, while interactive onboarding features like tooltips and guided tours can help new users use the app efficiently. Accessibility is still a top concern, requiring thorough testing and adherence to WCAG principles to guarantee inclusiveness for all users.

Reduced load times and increased stability should be the main goals of performance optimization, especially for consumers on slower networks. To secure user data, data security must be strengthened with improved encryption and frequent audits. In-app surveys and other continuous feedback methods will offer continuous insights for iterative changes in line with changing user demands. Lastly, thinking about localization and integration with various market platforms is part of becoming ready for the global arena. INNDOORS may improve consumer happiness, optimize operations, and stay competitive in the luxury resort booking market by implementing these suggestions.