

Terna Engineering College
Computer Engineering Department

Program: Sem VIII

Course: Human Machine Interaction (HMI)

Faculty: Umesh B Mantale

LAB Manual

Experiment No.06

A.1 Aim:

Design website for an application of the selected domain with home page and subsequent pages.

A.2 Prerequisite:

1. Knowledge of User Interface Designing.
2. Knowledge of Human Centered Design.
3. Knowledge about HTML.
4. Knowledge about HMI design Principles.

A.3 Outcome:

After successful completion of this experiment students will be able to

1. Apply HMI principles and guidelines in designing Interactive user interfaces for any specific Application.

A.4 Theory:

Identify the Domain and Persona: Before embarking on any intranet or website design project, it is important to understand the needs of your users. It is then possible to identify the features and functionality that will make the intranet or website a success, and how the design can support users with different goals and levels of skill. The best way to do that is to create user personas. Personas are archetypal users of an intranet or website that represent the needs of larger groups of users, in terms of their goals and personal characteristics. They act as ‘stand-ins’ for real users and help guide decisions about functionality and design. Personas identify the user motivations, expectations and goals responsible for driving online behavior, and bring users to life by giving those names, personalities and often a photo. The following are the steps to create persona

1. Identify user behavioral patterns.
2. Arrange interview as per user behavior.
3. Recognize user behavioral patterns.
4. Generate various user characteristics and relevant goals.
5. Check for completeness of goals.
6. Explain all attributes and behavior of user.
7. Design various persona

Design Principles& Guidelines:

Design principles: High-level and context free design goals based on theories of human computer interaction. It improves user's task performance and reduce their effort. Provide and constrain affordances to capture real world knowledge. The Principles of UI include: aesthetically pleasing, clarity, compatibility, comprehensibility, configurability, consistency, control, directness, efficiency, familiarity and flexibility.

Design guidelines: Specific and usually context dependent rules for designers to follow in order to achieve the principles.

The following are the list of guide lines for UI design:

- Match the operator's mental model
- Fit design to the operators' physical environment
- Provide a sense of place
- Anticipate operators' needs
- Minimize cognitive load
- Be consistent and follow conventions
- Show status and provide feedback
- Coordinate the visual design with the information design
- Use appropriate language
- Prevent errors and help operators recover from errors
- Design with principled aesthetics

A. 5 Procedure:

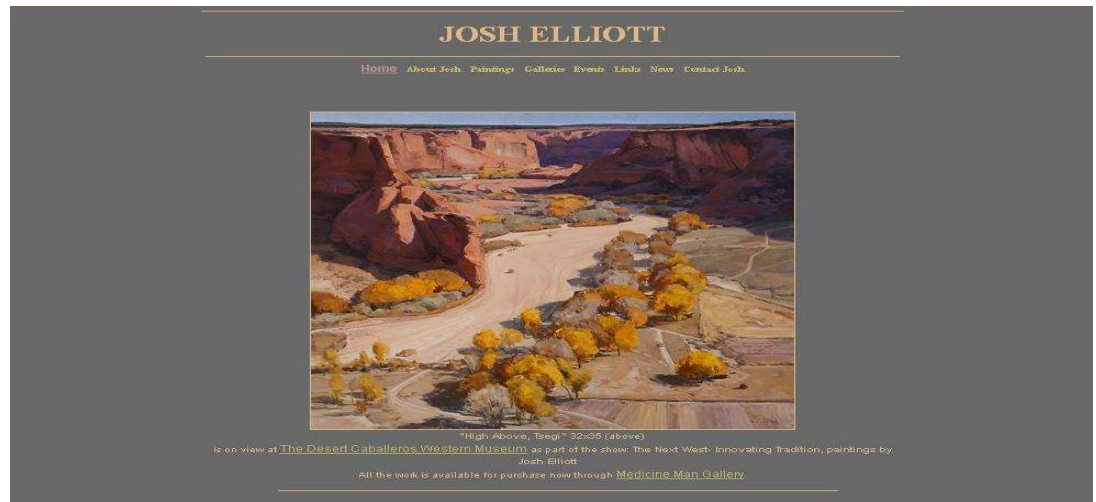
Consider a Web site for an artist: your main menu options should be minimum. The most important main menu categories are:

1. Artist's gallery or portfolio link.
2. Artist's statement or "About the for example a celebrity in some form of art like music, dance, painting, martial arts, etc. (not actors). This site will be used to display his works and should portray his character. Keep Art" link.
3. Artist's bio or "About the Artist" link.
4. Artist's contact information.
5. Provide proper color and animations.
6. Website should be aesthetically pleasing
7. It should match the operator's mental model

8. It should anticipate operators needs
9. Coordinate visual design with information design
10. Show status and provide feedback

Navigation links should appear in same place on every page. No long paragraphs of instructions or too much wording. At proper places animations can be added.

EXAMPLE:



PART B

Roll No.: A43	Name: Shruti Rathod
Class: BE-A	Batch: A3
Date of Experiment:	Date of Submission:
Grade:	

B.1 Tools used to develop application:

Brackets, Notepad++, Virtual Studio Code

B.2 Choice of User Interface Elements:

- Input form
- Labels
- Radio buttons
- Buttons
- Sliders
- Icons
- Logo
- Navigation Bar
- Images
- Header and Footer
- Text Fields

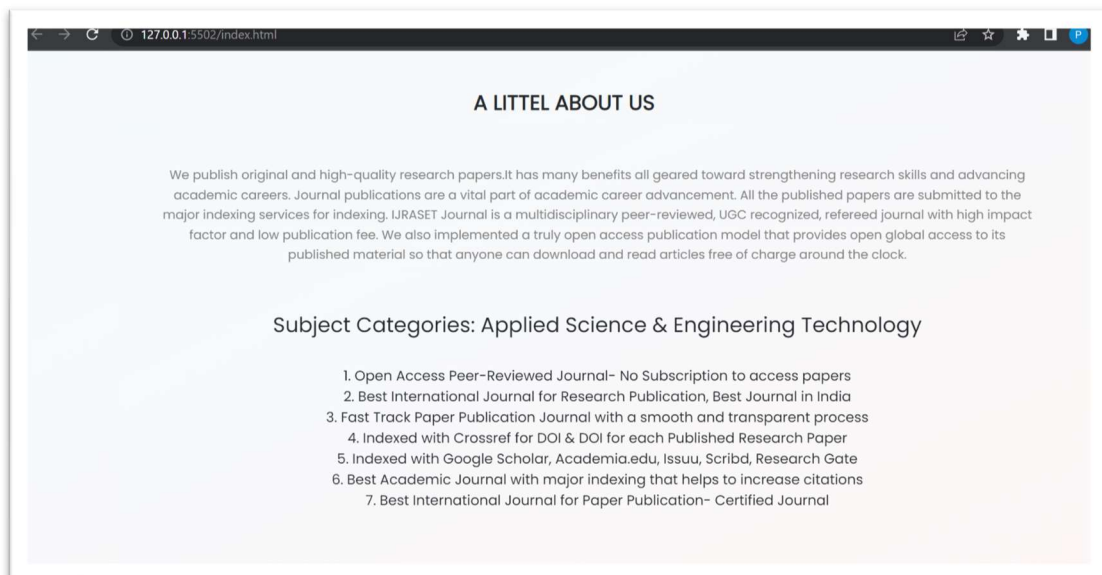
B.3 What is persona? List out the procedures you used to create the persona of your application?

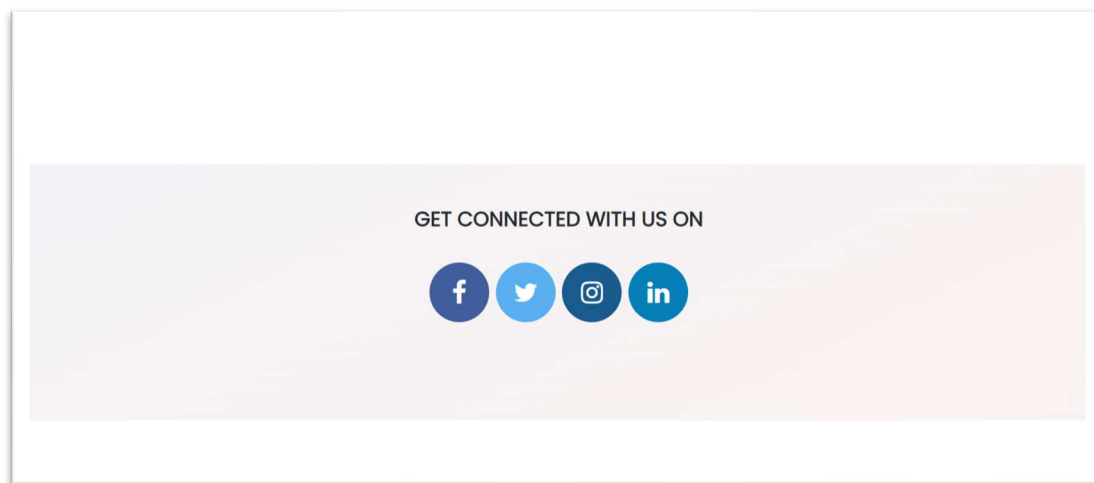
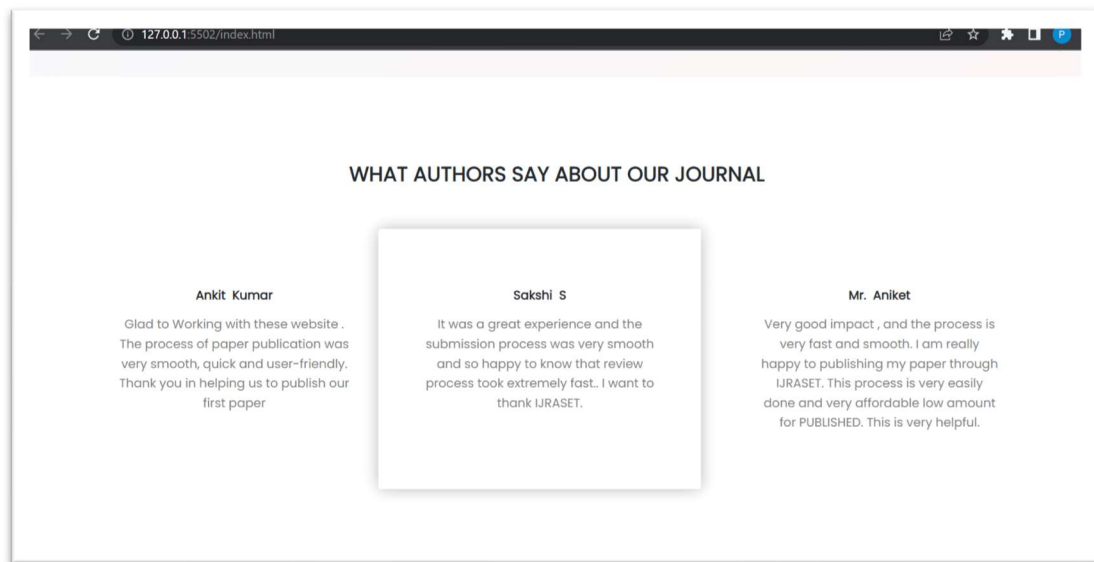
ANS: A persona, (also user persona, customer persona, buyer persona) in user-centered design and marketing is a fictional character created to represent a user type that might use a site, brand, or product in a similar way.

In my website design we have a contact us form where customers can give their requirement on the blood group types, they need which will help the application to find it early.

The goal behind this website is since the internet is arrived many users shop online so our website is trying to give maximum pleasure for customers to easily search the required blood type and can also help donate blood and be a part of the helping community.

B.4 User Interface Designs: Home Page:





B.5 How does the design guidelines and principles helped in creating your application?

ANS: It helped in understanding the needs of the customers. With that help we created a website which can target any audience and encourage them to donate blood and help other people.

B.6 Conclusion:

After successful completion of this experiment, we are able to apply HMI principles and guidelines in designing Interactive user interfaces for any specific Application.