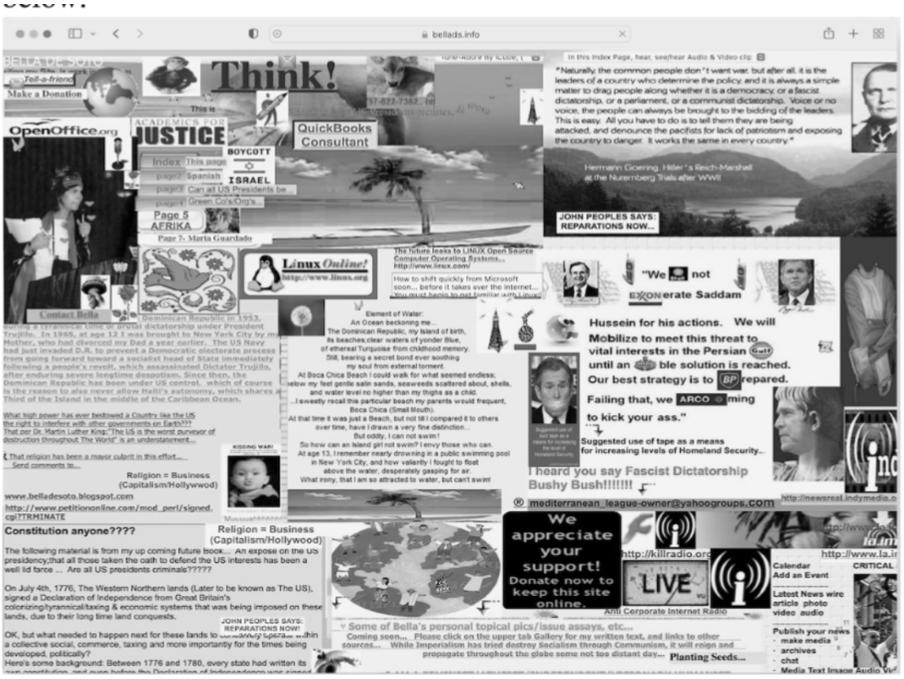
HCI MODEL QUESTIONS

1. You are part of a team of HCI designers tasked with creating an online learning platform tailored for students preparing for competitive exams. To accomplish this, the platform will incorporate various interactive features such as practice tests, flashcards, video lectures, real-time progress tracking, schedule the timetable, personalized recommendations, and discussion forums.
    i. Design the interface with appropriate interaction style based on human-problem solving approach for any two features of the application.
    ii. Elaborate on any sequence of task interaction in your interface design that justifies your choice of elements that optimize the interface using the human-problem solving approach.

2. Consider the screenshot of the website design provided and answer the questions provided [10] below.



    i. Specify the Norman's principles of interaction design that have been violated in this website design.
    ii. Examine the impact of Norman's principles on increasing the user productivity.

3. The Olympics committee has put together a team of website designers for creating a website for the 'Paralympics 2024' games. The design team is committed to embodying accessibility and inclusivity principles to ensure that all users, including those with disabilities, can fully engage with the platform. The Olympics committee requires the design team to incorporate essential features

such as alt text for images (concise description of an image), captions for videos, intuitive navigation options and assistive technologies etc for providing accessibility to all users.

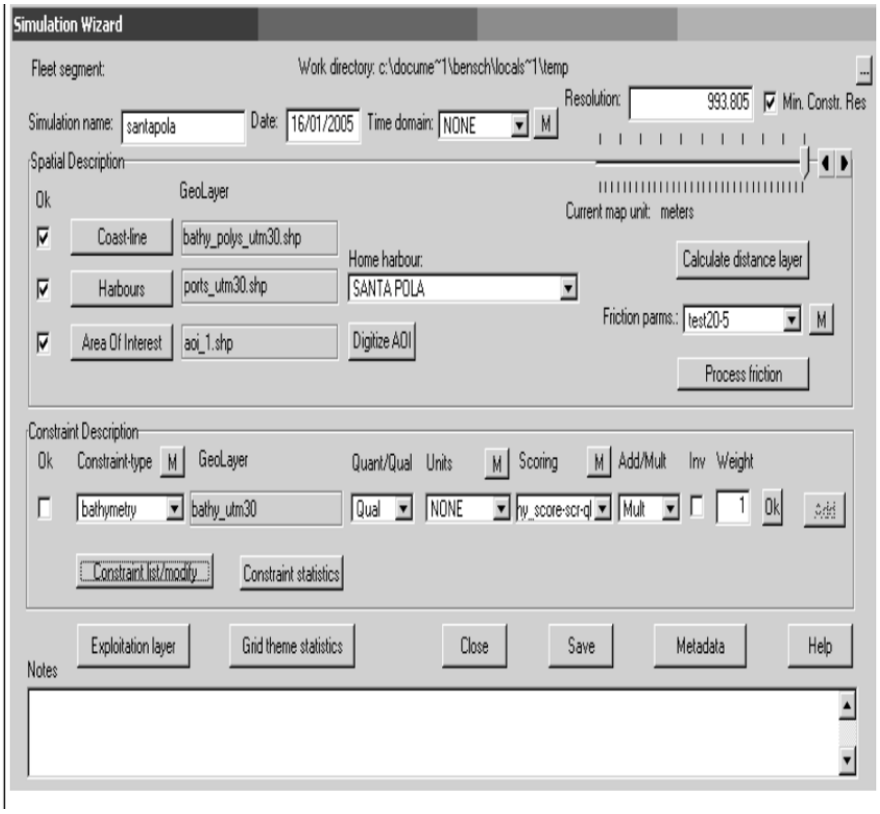
   i. Considering this goal, elaborate on how the website team would approach the design process for user with disability to incorporate essential features recommended by the committee to create a user-friendly UI that can be accessed by users with disabilities.
   ii. Design and customize the appropriate input and output devices that facilitate user input and output on the 'Paralympics 2024' games website.
   iii. Design web and mobile compatible wireframes for any scenario that clearly depicts the layout and functionality of the app's primary screen with neat illustration. Detail the principles and guidelines used for your design.

4. Imagine you are a member of a design team responsible for developing a fitness and wellness app focused on promoting healthy habits and physical activity among users. The app will include features like workout routines, nutrition tracking, goal setting, progress monitoring, community challenges and expert advice.
   i. Design the interface with appropriate interaction style based on human-problem solving approach for any two features of the application.
   ii. Elaborate on any sequence of task interaction in your interface design that justifies your choice of elements that optimize the interface using the human-problem solving approach.

5. Suppose you are an HCI designer involved in creating a travel planning application that utilizes [20] augmented reality (AR) to offer personalized travel recommendations and immersive experiences to users. The app is designed to cater to both adventure-seeking millennials and older travelers who may prefer more traditional travel planning methods. As an experienced designer interpret, refine, and extend the Eight Golden Rules of interface design for the UI of the travel planning application.

6. The Indian Railways has been planning to develop "Rail Yatri Guide" a touch screen kiosk, as a single-point enquiry station for answering all the queries of passengers, including guidance and navigation for accessing various facilities available at the railway station. Assume that you are the UI designer for the on-screen application of the "Rail Yatri Guide" kiosk. Develop a hierarchical task analysis (HTA) diagram for "Rail Yatri Guide". Also, design two interfaces and critically analyse the implications of Fitts' law on the design.

7. It's been said that the human mind can remember 7(+ or -) 2 chunks of information. Discuss the truth of this statement, and cite two situations in which it has been misused in the design of computer interfaces.
8. As a UI designer, you are tasked with designing a word editor application. To create an effective interface, you aim to analyze the features of the Microsoft Word interface to understand the best plan for your design. Specifically, you focus on analyzing the design task of saving an existing file to implement the changes made. Microsoft Word offers different options for saving a file, such as choosing the option to save using the mouse or using the shortcut key 'Ctrl+S. List the sequence of subtasks involved in any two scenarios to save the document in Microsoft Word and estimate the time taken by different users for the above-mentioned tasks using the GOMS model of 'saving a file.'
9. Examine the following interface:



Name the UI Golden Rules that has been violated in the above interface. Examine the impact of the Golden Rules on increasing the user productivity.