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Shri Shivaji Education Society, Amravati's  
**SHRI SHIVAJI SCIENCE & ARTS COLLEGE, CHIKHALI**  
Dist. Buldana

Internal Assessment - Assignment / Project Report / Seminar

Name of the Student Prajakta Rajendra Kale

Class III (Sem. VI)

Academic Session : 20 21....., - 20 22.....

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The Topic of the assignment / Project Report is Human computer interaction project

Dated 18 / 04 / 2022

Signature of the teacher

who guide / taught the Examinee.

1. DR. A.B. Kadam *AK*

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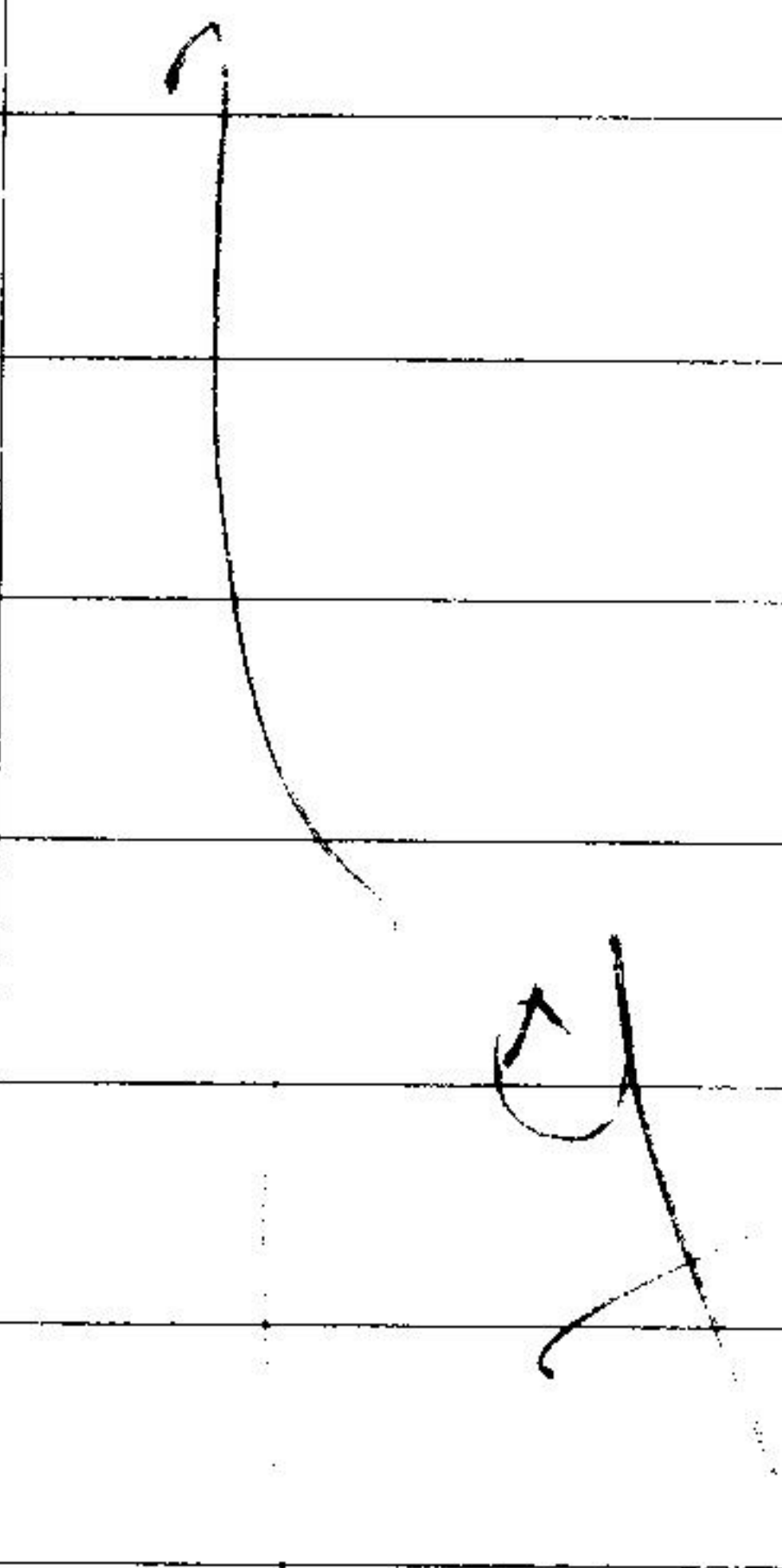
**Project Report On:**  
*Human Computer Interaction*

For

*DEPARTMENT OF COMPUTER  
SCIENCE CLASS :B.SC.PART-III  
SEM-VI 2021-2022*

**PRESENTED BY :KU. PRAJAKTA RAJENDRA KALE**  
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Ku Prajta R. Kale

PRKale

# Human Computer Interaction

## INTRODUCTION

Humans interact with computers in many ways, and the interface between the two is crucial to facilitating this interaction. HCI is also sometimes termed human-machine interaction (HMI), man-machine interaction (MMI) or computer-human interaction (CHI). Desktop applications, internet browsers, handheld computers, and computer kiosks make use of the prevalent graphical user interfaces (GUI) of today. Voice user interfaces (VUI) are used for speech recognition and synthesizing systems, and the emerging multi-modal and Graphical user interfaces (GUI) allow humans to engage with embodied character agents in a way that cannot be achieved with other interface paradigms. The growth in human-computer interaction field has led to an increase in the quality of interaction, and resulted in many new areas of research beyond. Instead of designing regular interfaces, the different research branches focus on the concepts of multimodality over unimodality, intelligent adaptive interfaces over command/action based ones, and active interfaces over passive interfaces.

The Association for Computing Machinery (ACM) defines human-computer interaction as "a discipline that is concerned with the design, evaluation, and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them". An important facet of HCI is user satisfaction (or End-User Computing Satisfaction). It goes on to say: (1)

### **Objectives**

The HCI program has two main objectives:

Graduates from the proposed program will therefore have a significant competitive advantage in the job market. The second objective is to enable those HCI graduates who qualify and wish to continue their studies to a Ph. (2)

## Methodologies

Various strategies delineating methods for human-PC interaction design have developed since the conception of the field during the 1980s. Most plan philosophies come from a model for how clients, originators, and specialized frameworks interface. Early techniques treated clients' psychological procedures as unsurprising and quantifiable and urged plan specialists to look at subjective science to establish zones, (for example, memory and consideration) when structuring UIs. Present-day models, in general, center around a steady input and discussion between clients, creators, and specialists and push for specialized frameworks to be folded with the sorts of encounters clients need to have, as opposed to wrapping user experience around a finished framework.

- Activity theory: utilized in HCI to characterize and consider the setting where human cooperations with PCs occur. Action hypothesis gives a structure for reasoning about activities in these specific circumstances and illuminates the design of interactions from an action-driven perspective.

User-centered design (UCD): a cutting-edge, broadly-rehearsed plan theory established on the possibility that clients must become the overwhelming focus in the plan of any PC framework. Clients, architects, and specialized experts cooperate to determine the requirements and restrictions of the client and make a framework to support these components. Frequently, client-focused plans are informed by ethnographic investigations of situations in which clients will associate with the framework. This training is like participatory design, which underscores the likelihood for end-clients to contribute effectively through shared plan sessions and workshops.

Principles of UI design: these standards may be considered during the design of a client interface: resistance, effortlessness, permeability, affordance, consistency, structure, and feedback.(3)



## Applications of Human-Computer Interaction

### Everyday Life

Today, technology has infiltrated every area of our life. Even if a person does not directly own or use a computer, computers have an impact on their lives. ATM machines, railway ticket selling machines, and hot beverage vending machines are just a few examples of computer interfaces that people may interact with on a regular basis without having to possess a computer.

### Industry and Business

HCI is significant for any company that relies on technology or computers in its day-to-day operations. Staff are more content and productive when working with well-designed usable systems since they are not irritated. HCI is particularly essential in the design of safety-critical systems like those found in power plants and air traffic control centres. In these instances, design flaws can have catastrophic consequences, including the death of many individuals.(4)

### Advantages

1. Multitasking Multitasking–MultitaskingMultitasking is one among the main advantage of computer. Person can do multiple task, multiple operation at a same time, calculate numerical problems within few seconds. Computer can perform millions or trillions of work in one second.
2. Speed –Now computer isn't just a calculating device. Now a day's computer has vital role in human life. One of the most advantages of computer is its incredible speed, which helps human to finish their task in few seconds.
3. Cost/ Stores huge –Amount of knowledge it's a coffee cost solution. Person can save huge data within a coffee budget. Centralized database of storing information is that the major advantage which will reduce cost.

### Disadvantages

1. Virus and hacking attacks –Virus may be a worm and hacking is just an unauthorized access over computer for a few illicit purpose. Virus can go to other system from email attachment, viewing an infected website advertisement, through removable device like USB etc.
2. Online Cyber Crimes –Online cyber-crime means computer and network may have utilized in order to commit crime. Cyberstalking and fraud are the points which comes under online cyber-crimes.

3. Reduction employed opportunity –Mainly past generation wasn't used of the pc or they need the knowledge of computer they faced an enormous problem when computer came in field.

## **Conclusion**

Human-computer interaction has become a necessary part of daily life for the majority of Americans and millions of others around the world. By reviewing these websites with a focus on how to interact with them has shown that it is imperative that web designers must focus on human-computer interaction when designing websites. However, that focus cannot be to improve the interactions for the average user. Instead the focus should be on making the interactions a better experience for everyone who might use that website. Judging by the websites reviewed here, which are all well designed for the average user, designers still have a long way to go to make these sites easily usable by all.

## **Reference**

1. Suchman, Lucy (1987). Plans and Situated Action. The Problem of Human-Machine Communication. New York, Cambridge: Cambridge University Press. ISBN 9780521337397. Retrieved 7 March 2015.
2. ^ Dourish, Paul (2001). Where the Action Is: The Foundations of Embodied Interaction. Cambridge, MA: MIT Press. ISBN 9780262541787.
3. Hewett; Baecker; Card; Carey; Gasen; Mantei; Perlman; Strong; Verplank. "ACM SIGCHI Curricula for Human-Computer Interaction". ACM SIGCHI. Archived from the original on 17 August 2014. Retrieved 15 July 2014.
4. ^ en:Multimodality, oldid 876504380