

User Interface Design (Module-1)

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Definitions

- **User interface design** is a subset of a field of study called human-computer interaction (HCI)
- **Human-computer interaction** is the study, planning, and design of how people and computers work together so that a person's needs are satisfied in the most effective way.
- The **user interface** is the part of electronic devices and its software that people can see, hear, touch, talk to, or otherwise understand or direct.

Components of UI

- The user interface has essentially two components: **input** and **output**. Input is how a person communicates his or her needs or desires to the computer.
- Input - keyboard, mouse, trackball, one's finger (for touch-sensitive screens or pads), and one's voice (for spoken instructions) .
- Output - how the computer conveys the results of its computations and requirements to the user. Today the most common computer output mechanism is the display screen,

Basic UI Types

- Text Based User Interface (TUI)
- Graphical User Interface (GUI)
- Web Interfaces

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..	4096	Oct 2 04:02		..	4096	Oct 2 04:02	
/ICAClient-3.0	2048	Jan 6 2003		./java	30	May 13 2004	
/aida-2.1.1	2048	Apr 28 2003		/ada	4096	Aug 9 2001	
/amber-6.0	2048	Feb 27 2004		/conf	151	Jul 19 2000	
/amber-7.0	2048	Mar 5 2004		/config	4096	Dec 13 2004	
/amber-7.0p	2048	Apr 16 2004		/cron.d	133	Sep 29 20:23	
/amber-8	2048	Dec 22 2004		/default	75	Aug 12 2004	
~ansys61	34	Jan 7 2003		/dt	27	Apr 5 2003	
~ansys71	34	Nov 28 2003		/fscklogs	39	Aug 3 2000	
/ant-1.6	2048	Aug 10 13:26		~fstyp.d	15	Apr 25 2000	
/apache-1.3.27	2048	Dec 16 2002		~httpd	20	Jul 19 2000	
/apache-1.3.28	2048	Jan 6 2004		/init.d	4096	Sep 21 15:45	
/apache-1.3.33	2048	Feb 7 2005		/js	4096	Aug 9 2001	
/autoconf-2.57	2048	May 27 2004		/lost+found	4096	Oct 8 2004	
/autodock-305	2048	Jan 5 2001		/mail	4096	May 2 10:04	

Hint: Keys not working in xterms? Use our xterm.ad, .ti and .tcap files.

aisa:/software>\$

1Help 2Menu 3View 4Edit 5Copy 6RenMov 7Mkdir 8Delete 9PullDn 10Quit

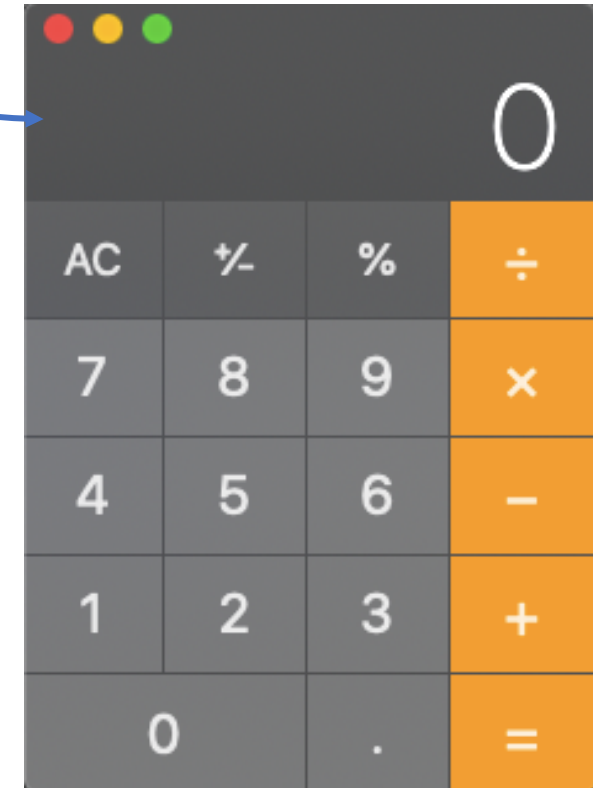
VTOP Login

Username

Password

[Forgot Password](#)
[Forgot UserID](#)

Sign in



Characteristics of GUI and Web interfaces

- Interaction styles.
- The concept of direct manipulation.
- The characteristics of graphical interfaces.
- The characteristics of Web interfaces.
- Web page versus Web application design.
- The general principles of user interface design.

Interaction Styles

- It is method, or methods, by which the user and a computer system communicate with one another.
 - **Command line** (function key or type a command into a designated entry area on a screen)
 - **Menu selection** (a set of options or choices from which a user must choose)
 - **Form fill-in** (useful for collecting information)
 - **Direct manipulation** (enables the user to directly interact with elements presented on the screen)
 - **Anthropomorphic** (the study of human societies and cultures and their development - interface tries to interact with people the same way people interact with each other. include spoken natural language dialogues, hand gestures, facial expressions, and eye movements)

Command Line

TUI Demo: Lynx Web Browser

- The Lynx web browser is a text-only browser originally developed by the University of Kansas in 1995.
- It is available as free open source software that runs on both Windows, Linux and the Mac.
- Lynx Basic Key Shortcuts
 - g or lynx URL – Open URL
 - ? – Help
 - Ctrl+R – Reload Page
 - Space – Next Page
 - Q - Quit

```
http://lynx.invisible-island.net/  
Copyright 1997-2017,2018 by Thomas E. Dickey  
  
* (home page)  
* Current development  
* Stable release  
* Resources  
  
LYNX - The Text Web-Browser  
  
Lynx is the text web browser.  
  
This is the toplevel page for the Lynx software distribution site.  
  
The current development sources have the latest version of Lynx available (development towards 2.9.0).  
The main help page for lynx-current is online; the current User Guide is part of the online documentation.  
  
The most recent stable release is lynx2.8.9.  
  
Other resources include:  
* Mailing list archives  
* pgp/gpg signatures  
  
Viewable with any browser; valid HTML.
```

Class Activity

- **Compare and contrast Lynx with your favorite web browser.**
- Mention minimum five reasons.

Instructions

- Enable your web Camera (Audio can be muted).
- Go to <https://moovit.vit.ac.in>
- Access CSI1005 Course Page and Start the Activity
(Name: **01_20_07_2020_Understanding_TUI**)

Activity Time : 10 Minutes

References

- Galitz, Wilbert O. *The essential guide to user interface design: an introduction to GUI design principles and techniques*. John Wiley & Sons, 2007.
- Wikipedia: The free encyclopedia. (2004, July 22). FL: Wikimedia Foundation, Inc. Retrieved July, 2020, from <https://www.wikipedia.org>