## User Interfaces in Computing

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#### A3 Announcement

A3 is up on the webpage and available for handout.



Midterms results are in the average was above 72 percent. I think this is pretty good so there will be no curve. Marks will be uploaded to CDF shortly.

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#### Midterms Out

Midterms results are in the average was above 72 percent. I think this is pretty good so there will be no curve. Marks will be uploaded to CDF shortly. See me in lecture to pick up your midterm (I'll leave some time at the end).

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#### What is a User Interface?

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#### User Interface Types

There are two main types of user interfaces:

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1. Text-Based User Interface or Command-Line Interface

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2. Graphical User Interface (GUI)

#### Text-Based User Interface

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- 1. Relies heavily on recall rather than recognition.
- 2. Navigation is often more difficult

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- 3. Typing Is -F will append characters describing the file type
- 4. Typing Is -R will recursively list subdirectories
- 5. There are many other options, and you can use combinations (for example Is -R -I)

You would need 128 buttons to allow any combination of the 7 typical options on 1 mouse-click.

What happens when you need too many buttons to do something is that the most commonly used features are still available, but combinations that are unpopular are often excluded from the User Interface.

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#### More powerful tasks

What happens when you need too many buttons to do something is that the most commonly used features are still available, but combinations that are unpopular are often excluded from the User Interface. So for example Is -R might not easily be available in a GUI, but is present in a command line interface.

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In a text-based interface in order to use a command you need to recall how to type it. To open JES we would need to remember the name of the program (and its command) and type jes into the command line.

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In a graphics-based interface you need to recognize a symbol in order to open the program you want. For example, we might recognize that a green bookworm with glasses is the JES program, even if we didn't know the exact name of the program, we can recognize the logo and click on it to open that program.

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Graphical User Interfaces are more common than text-based interfaces in modern computing.

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Most modern interfaces are typically variations or combinations of these two. Web-Based Interfaces are a type of GUI (although they rely on typing addresses) while Touchscreens are a type of GUI in which the touchscreen replaces the mouse.