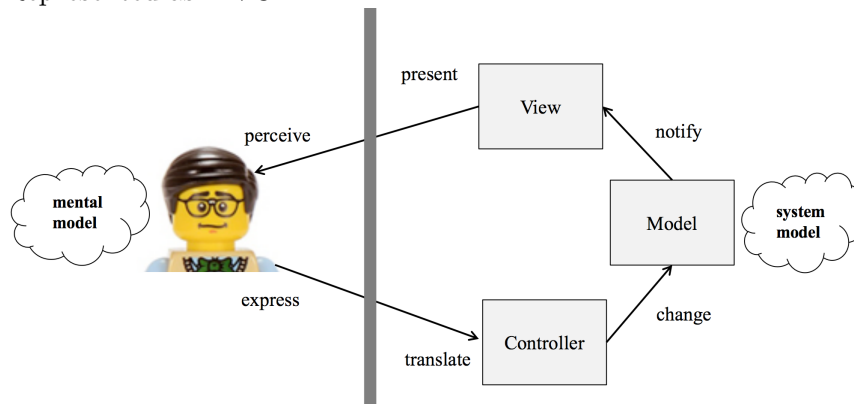


CS 349 Midterm Review

Background & History

- **User interface:**

- The place where a person *expresses intention* to an artifact, and the artifact *presents feedback* to the person
- The way people (mental model) and technology (system model) interact
- Represented as MVC:



- **Interface:** external presentation (visual, physical, auditory) to the user
 - e.g. controls
- **Interaction:** actions invoked by user and corresponding responses (behaviour)
 - e.g. action and dialog
- Batch interfaces (1945-1965)
 - Sets of instructions fed via punch cards
 - Only used by highly trained individuals
- Conversationalist interface (1965-1985+)
 - Text-based feedback and input
 - I/O is in system language, not task language
 - Vannevar Bush – created the memex, a desk with integrated display, input, and data storage
 - Ivan Sutherland – created the Sketchpad, an early graphical interface with a light pen and direct manipulation
 - Douglas Engelbart – invented the mouse, introduced copy/paste
 - Alan Kay – worked on the Xerox Star, first commercial computer with GUI
- Graphic user interface (1984+)
 - Hardware interface: high resolution & refresh graphics display, keyboard, and pointing device

- WIMP interface: windows, icons, menus, and pointer
- Benefits of GUI:
 - Keeps the user in control
 - Emphasize recognition (discovery of options) over recall (memorizing commands)
 - Uses metaphor; makes interaction language closer to user's language

Windowing Systems & X11

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Java

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