NORMANS RULES FOR INTERFACE DESIGN

- Visibility
- Feedback
- Constraints
- Mapping
- Consistency
- Affordance

Normans Rules for Interface Design

Visibility

•The more visible functions are, the more likely users will be able to know what to do next.

•In contrast, when functions are "out of sight", it makes them more difficult to find and know how to use.

Feedback

•Allowing the person to continue with the activity.

•Types such as tactile, verbal and combinations of these.

NORMANS RULES FOR INTERFACE DESIGN

Constraints

•Restricting the kind of user interaction that can take place at a given moment.

Mapping

•Relationship between controls and their effects in the world. up and down arrows used to represent the up and down movement of the cursor, respectively, on a computer keyboard.

NORMANS RULES FOR INTERFACE DESIGN

Consistency

•Interfaces to have similar operations and use similar elements for achieving similar tasks.

•Using the same input action to highlight any graphical object at the interface, such as always clicking the **left mouse button**. Inconsistent interfaces, on the other hand, allow exceptions to a rule.

Affordance

•At a very simple level, to afford means " to give a clue" (Norman, 1988).

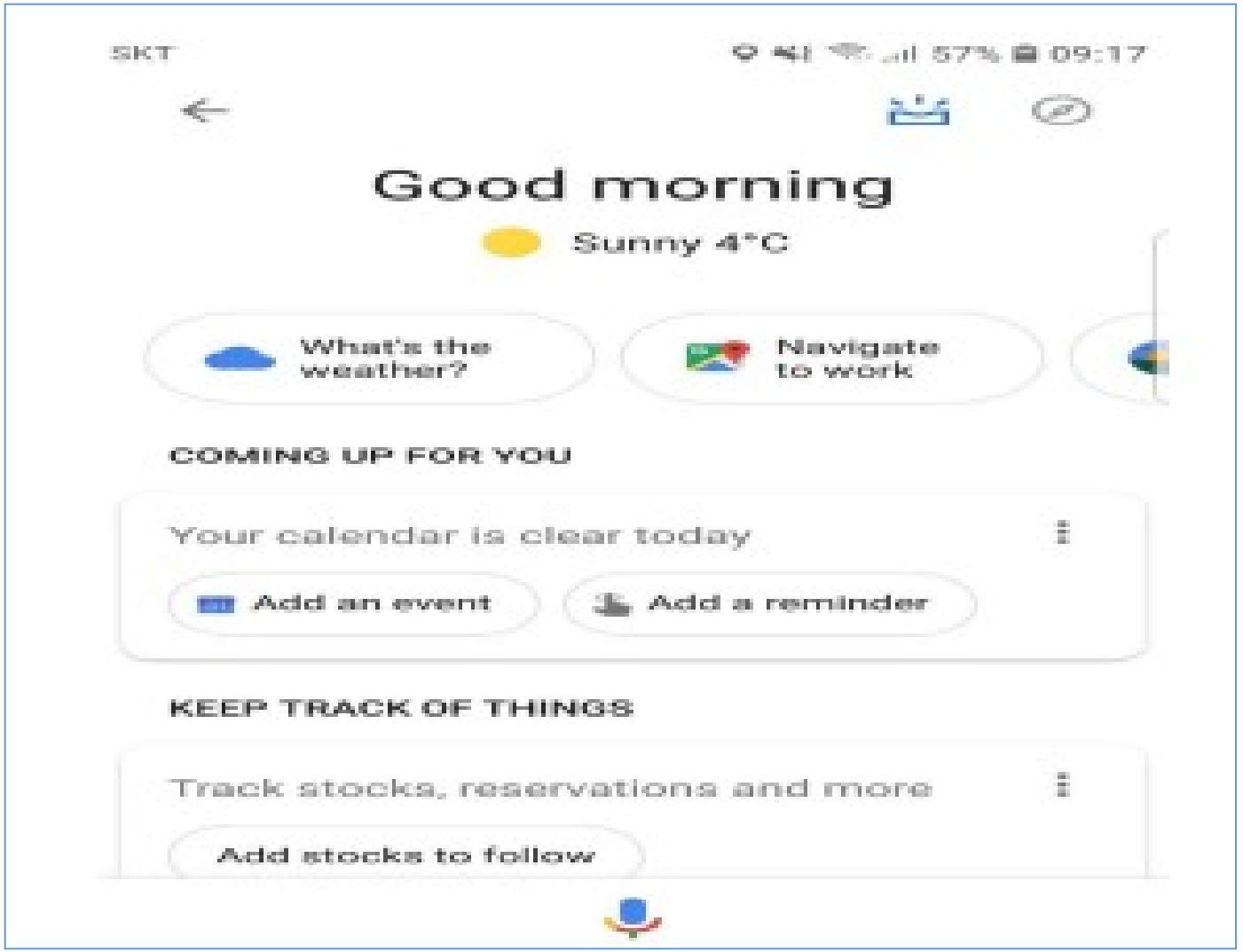
•When the affordances of a physical object are perceptually obvious; it is easy to know how to interact with it.

WRAP UP…..

VISIBILITY

Hamburger side-bar menus and tab-bar menus in mobile applications

FEEDBACK

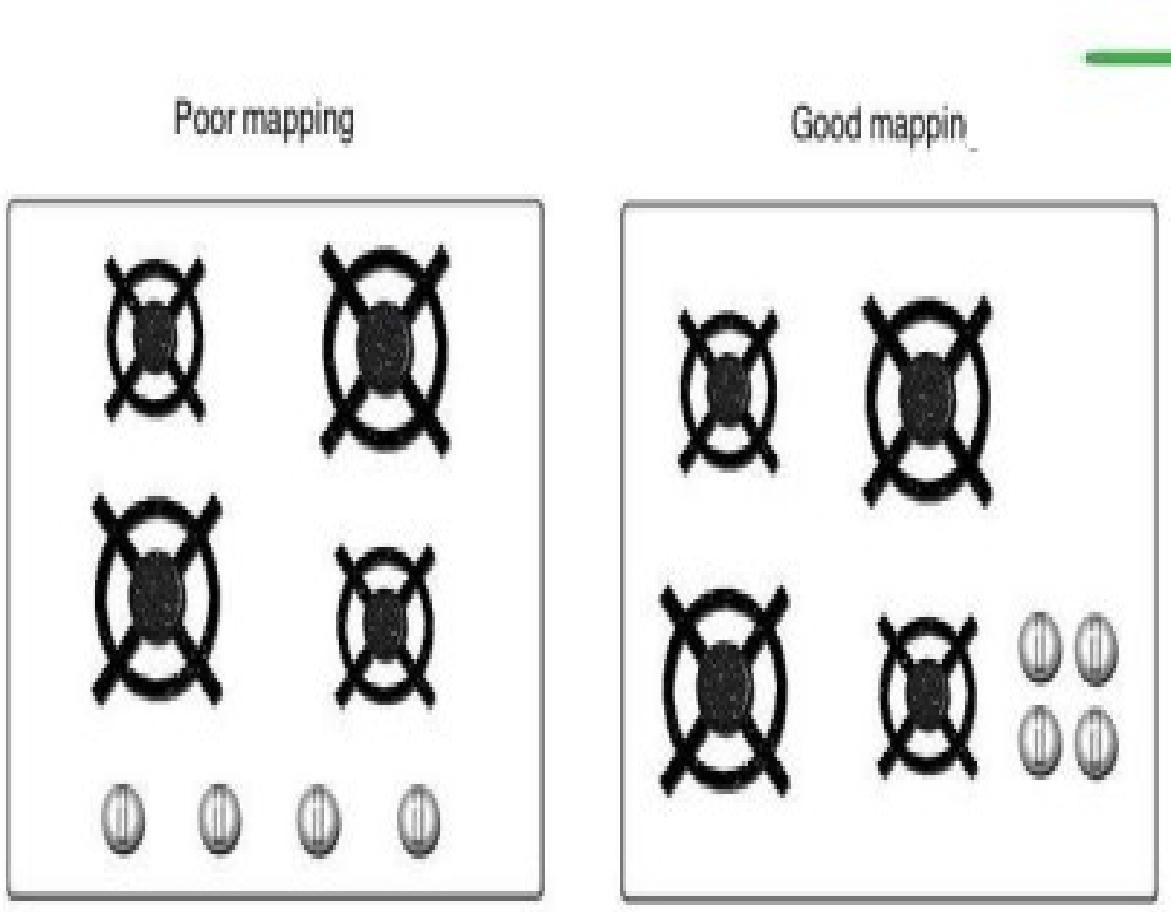


Many forms of feedback exist in interaction design, including visual, tactile, audio, and more.

CONSTRAINTS

Constraints is about limiting the range of interaction possibilities for the user to simplify the interface and guide the user to the appropriate next action.

MAPPING



This slider also has a strong mapping, since it's clear moving it to the right will increase it's value versus moving it to the left will decrease it.

WRAP UP…

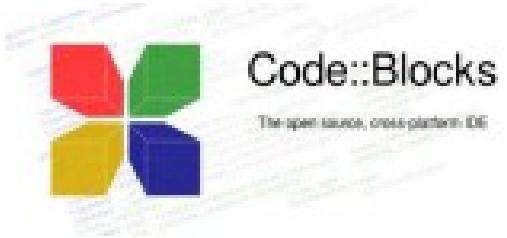
CONSISTENCY

This is a simple example of poor consistency when you are using so many different styles for actions within your interface.

WRAP UP…

AFFORDANCE

When you do this, you are giving the door a strong affordance to indicate it should be pushed instead of pulled.



ACTIVITY....

- **Consider any application that you are familiar (i.e., Mobile app or software application or Website)**
- **Evaluate the considered application using Don Norman's Principles of Interaction Design.**

PRINCIPLES TO SUPPORT USABILITY

Learnability

- The ease with which new users can begin effective interaction and achieve maximal performance

Flexibility

- The multiplicity of ways the user and system exchange information

Robustness

- The level of support provided the user in determining successful achievement and assessment of goal-directed behavior

PRINCIPLES OF LEARNABILITY

Predictability

- Determining effect of future actions based on past interaction history
- Operation visibility
- Synthesizability
- Assessing the effect of past actions

Familiarity

- How prior knowledge applies to new system
- Guessability; affordance

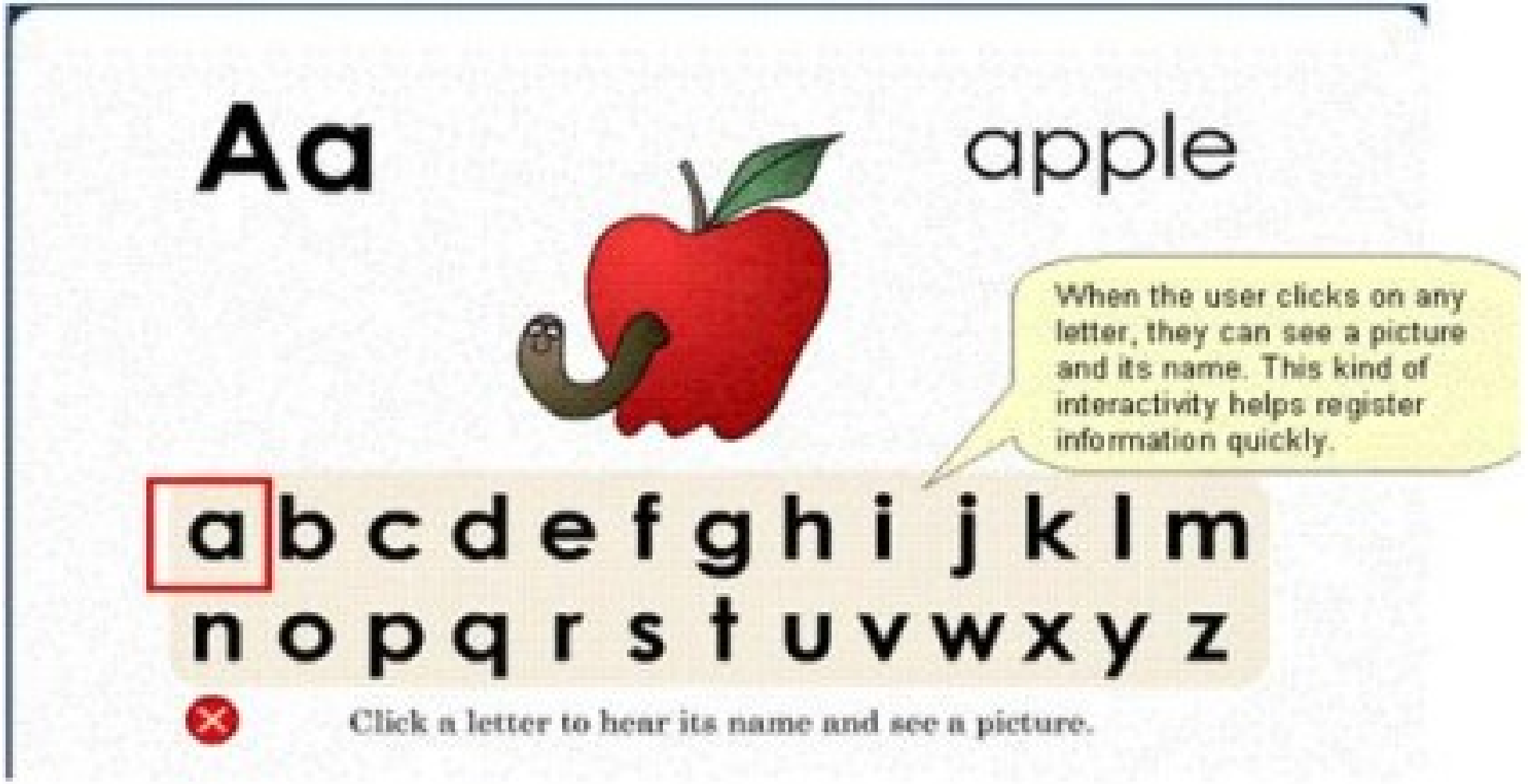
Generalizability

Extending specific interaction knowledge to new situations

Consistency

Likeness in input/output behaviour arising from similar situations or task objectives

LEARNABILITY



PRINCIPLES OF FLEXIBILITY

- Dialogue initiative
- Freedom from system imposed constraints on input dialogue
- Multithreading
- Ability of system to support user interaction for more than one task at A time
- Task migratability
- Passing responsibility for task execution between user and system

FLEXIBILITY

PRINCIPLES OF ROBUSTNESS

Observability

Ability of user to evaluate the internal state of the system from its perceivable representation

Recoverability

Ability of user to take corrective action once an error has been recognized

Reachability; forward/backward recovery; commensurate effort

Responsiveness

How the user perceives the rate of communication with the system Stability

Task conformance

Degree to which system services support all of the user's tasks

ROBUSTNESS

The quality or condition of being strong and in good condition.

Hard to remember

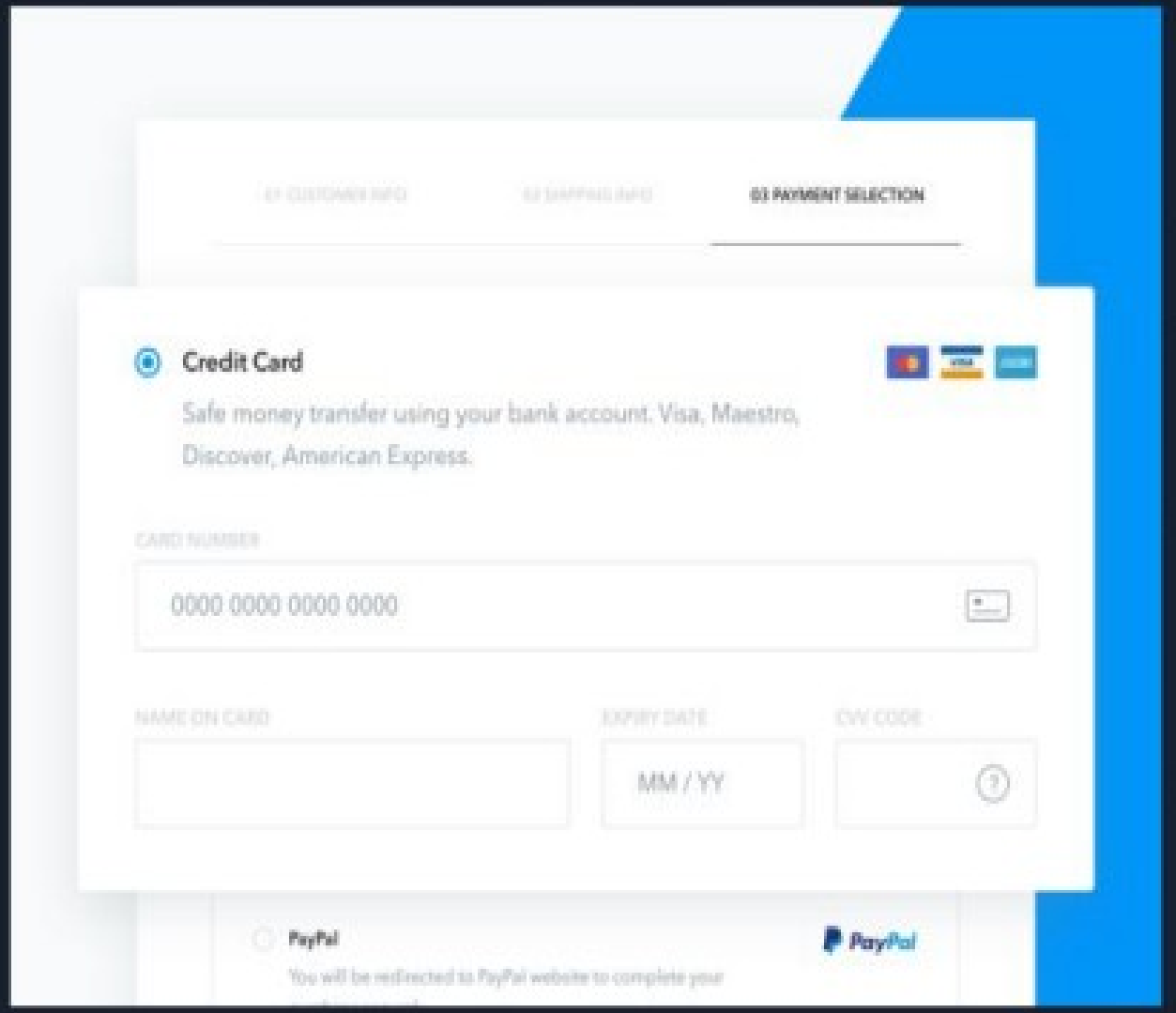
Easy to remember

The average person can keep only 7 (±2) items in their working memory.

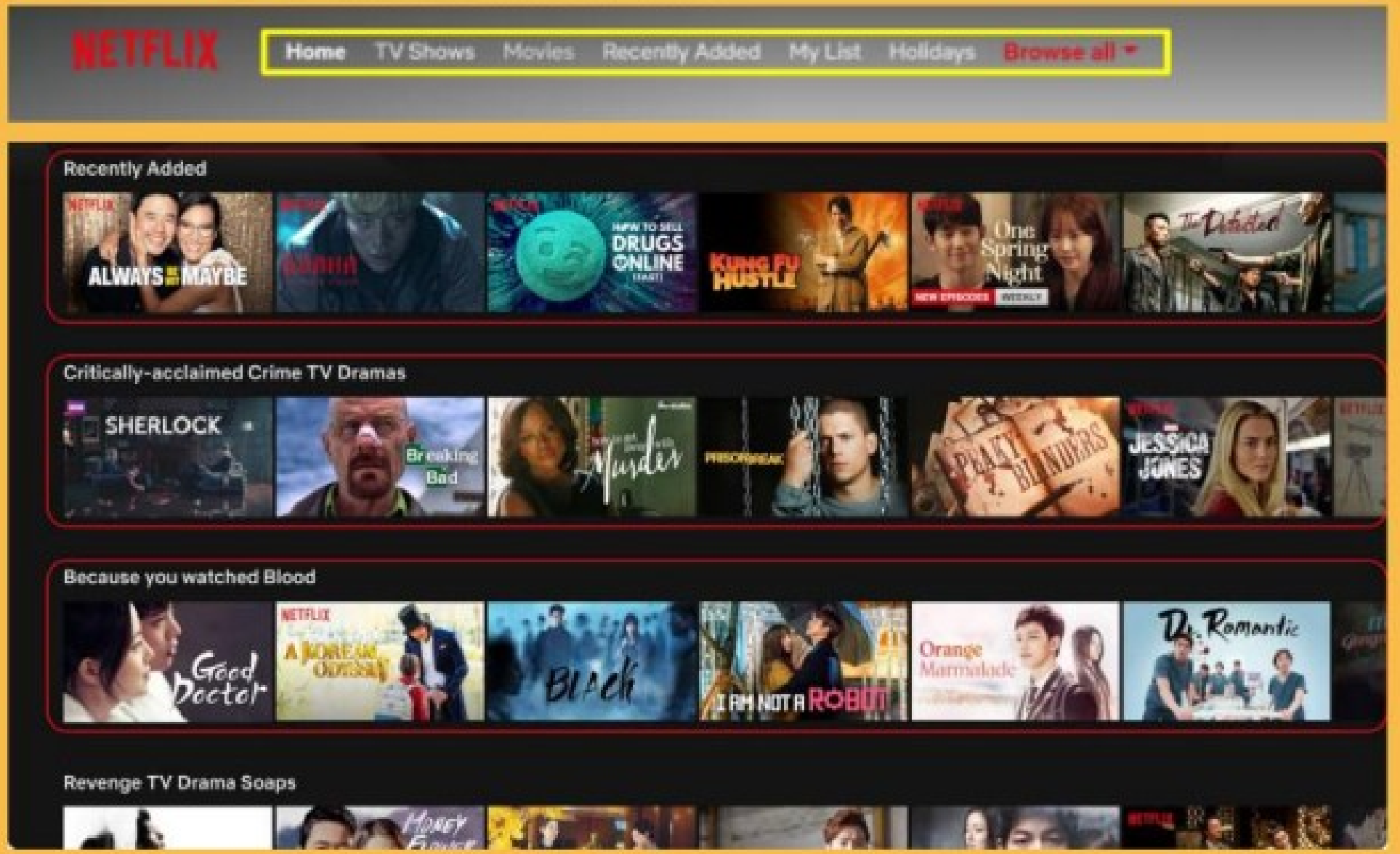
MILLER'S LAW

→

Enter the card number



Has been simplified a lot by chunking them into groups!



Categorising and grouping information together, allow the user to easily find what they are looking for.

A wall of text is an excessively long post to a noticeboard or talk page discussion, which can often be so long that some don't read it. Some walls of text are intentionally disruptive, such as when an editor attempts to overwhelm a discussion with a mass of irrelevant kilobytes. Other walls are due to lack of awareness of good practices, such as when an editor tries to cram every one of their cogent points into a single comprehensive response that is roughly the length of a short novel. Not all long posts are walls of text; some can be nuanced and thoughtful. Just remember: the longer it is, the less of it people will read. The chunk-o'text defense (COTD) is an alleged wikilawyering strategy whereby an editor accused of wrongdoing defends their actions with a giant chunk of text that contains so many diffs, assertions, examples, and allegations as to be virtually unanswerable. However, an equal-but-opposite questionable strategy is dismissal of legitimate evidence and valid rationales

Increases the cognitive load on users.

Wall of Text

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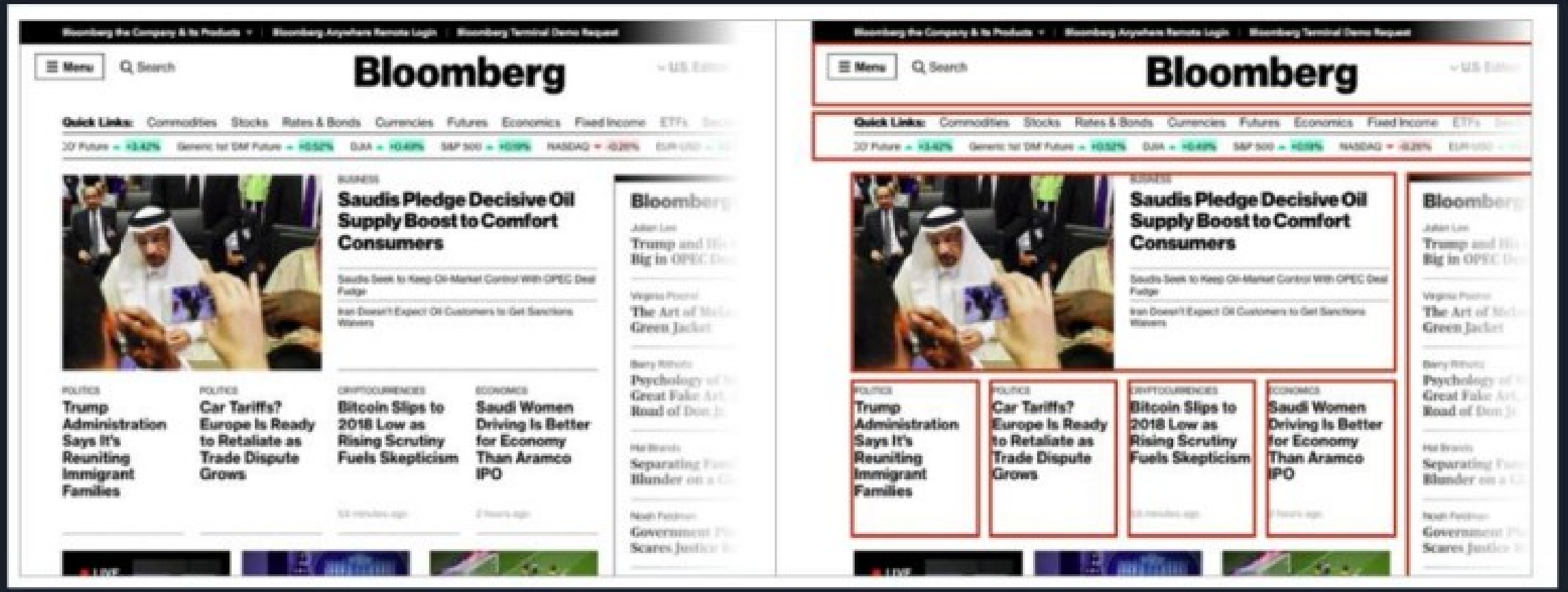
Improved version of the same content by providing structure and hierarchy.



Example of chunking applied to dense information

MILLER'S LAW

Key Takeaways

01 Organize content into smaller chunks to help users process, understand, and memorize easily.

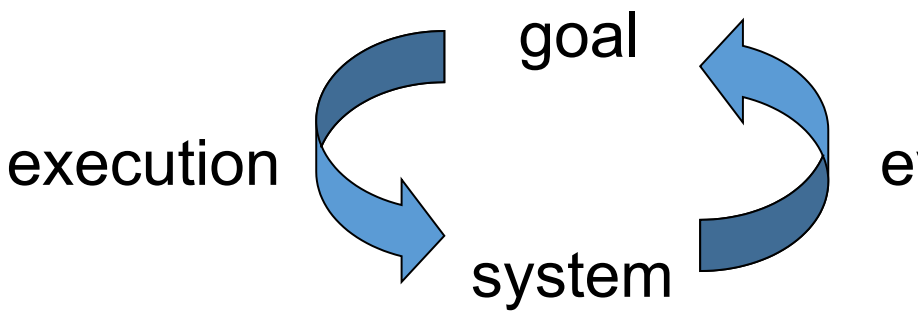
02 Remember that short-term memory capacity will vary per individual, based on their prior knowledge and situational context.

Donald Norman's model

- Seven stages
  - user establishes the goal
  - formulates intention
  - specifies actions at interface
  - executes action
  - perceives system state
  - interprets system state
  - evaluates system state with respect to goal

- Norman's model concentrates on user's view of the interface

execution/evaluation loop



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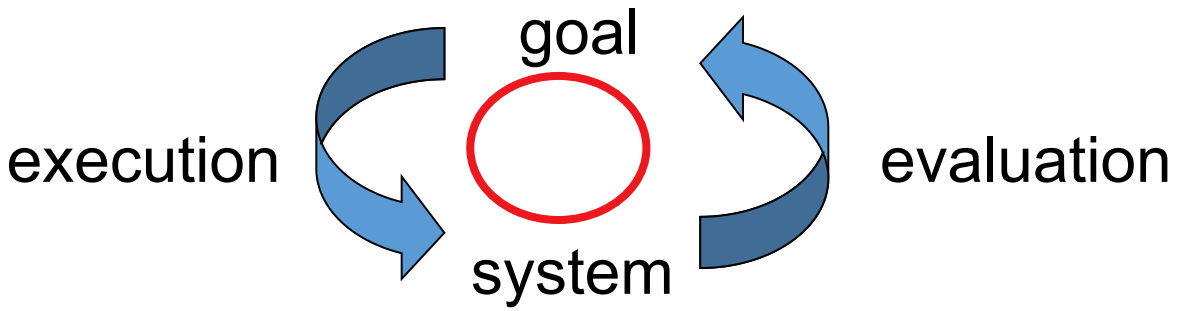

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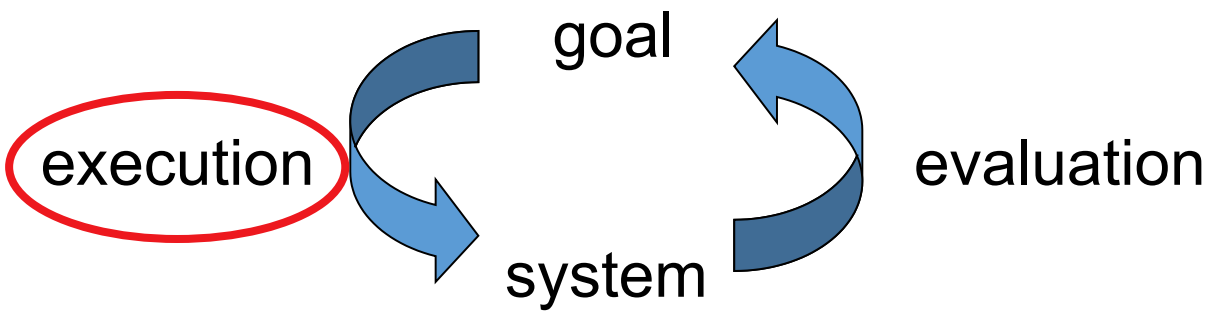

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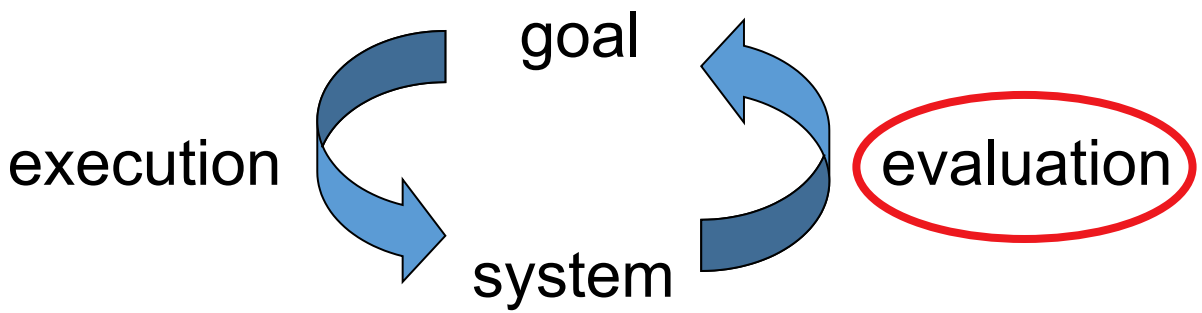

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