Heuristic Evaluation - A System Checklist

1. Visibility of System Status

The system should always keep user informed about what is going on, through appropriate feedback within reasonable time.

#	Review Checklist	Yes	No	Comments
1.1	Does every display begin with a title or header that describes screen contents?			
1.2	Is there a consistent icon design scheme and stylistic treatment across the system?			
1.4	Do menu instructions, prompts, and error messages appear in the same place(s) on each menu?			
1.8	Is there some form of system feedback for every operator action?			
1.9	After the user completes an action (or group of actions), does the feedback indicate that the next group of actions can be started?			
1.10	Is there visual feedback in menus or dialog boxes about which choices are selectable?			
1.11	Is there visual feedback in menus or dialog boxes about which choice the cursor is on now?			
1.12	If multiple options can be selected in a menu or dialog box, is there visual feedback about which options are already selected?			
1.13	Is there visual feedback when objects are selected or moved?			
1.16	If there are observable delays (greater than fifteen seconds) in the system's response time, is the user kept informed of the system's progress?			
1.17	Are response times appropriate to the task?			
1.18	Typing, cursor motion, mouse selection: 50-1 50 milliseconds			
1.19	Simple, frequent tasks: less than 1 second			
1.20	Common tasks: 2-4 seconds			
1.21	Complex tasks: 8-12 seconds			
1.22	Are response times appropriate to the user's cognitive processing?			
1.23	Continuity of thinking is required and information must be remembered throughout			

	several responses: less than two seconds.			
1.24	High levels of concentration aren't necessary and remembering information is not required: two to fifteen seconds.			
1.26	Does the system provide *visibility:* that is, by looking, can the user tell the state of the system and the alternatives for action?			
1.29	If users must navigate between multiple screens, does the system use context labels, menu maps, and place markers as navigational aids?			

2. Match Between System and the Real World

The system should speak the user's language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

#	Review Checklist	Yes	No	Comments
2.2	Are menu choices ordered in the most logical way, given the user, the item names, and the task variables?			
2.3	If there is a natural sequence to menu choices, has it been used?			
2.6	Do the selected colors correspond to common expectations about color codes?			
2.7	When prompts imply a necessary action, are the words in the message consistent with that action?			
2.11	For question and answer interfaces, are questions stated in clear, simple language?			
2.12	Do menu choices fit logically into categories that have readily understood meanings?			
2.13	Are menu titles parallel grammatically?			
2.14	Does the command language employ user jargon and avoid computer jargon?			
2.22	Do GUI menus offer activation: that is, make obvious how to say *"now do it"?*			

3. User Control and Freedom

Users should be free to select and sequence tasks (when appropriate), rather than having the system do this for them. Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without

having to go through an extended dialogue. Users should make their own decisions (with clear information) regarding the costs of exiting current work. The system should support undo and redo.

#	Review Checklist	Yes	No	Comments
3.4	When a user's task is complete, does the system wait for a signal from the user before processing?			
3.5	Can users type-ahead in a system with many nested menus?			
3.6	Are users prompted to confirm commands that have drastic, destructive consequences?			
3.7	Is there an "undo" function at the level of a single action, a data entry, and a complete group of actions?			
3.8	Can users cancel out of operations in progress?			
3.12	If menu lists are long (more than seven items), can users select an item either by moving the cursor or by typing a mnemonic code?			
3.13	If the system uses a pointing device, do users have the option of either clicking on menu items or using a keyboard shortcut?			
3.14	Are menus broad (many items on a menu) rather than deep (many menu levels)?			
3.15	If the system has multiple menu levels, is there a mechanism that allows users to go back to previous menus?			
3.17	Can users move forward and backward between fields or dialog box options?			
3.19	If the system uses a question and answer interface, can users go back to previous questions or skip forward to later questions?			
3.20	Do function keys that can cause serious consequences have an undo feature?			
3.21	Can users easily reverse their actions?			
3.22	If the system allows users to reverse their actions, is there a retracing mechanism to allow for multiple undos?			
3.23	Can users set their own system, session, file, and screen defaults?			

4. Consistency and Standards

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

#	Review Checklist	Yes	No	Comments
4.1	Have industry or company formatting standards been followed consistently in all screens within a system?			
4.2	Has a heavy use of all uppercase letters on a screen been avoided?			
4.5	Are icons labeled?			
4.6	Are there no more than twelve to twenty icon types?			
4.7	Are there salient visual cues to identify the active window?			
4.8	Does each window have a title?			
4.9	Are vertical and horizontal scrolling possible in each window?			
4.10	Does the menu structure match the task structure?			
4.11	Have industry or company standards been established for menu design, and are they applied consistently on all menu screens in the system?			
4.12	Are menu choice lists presented vertically?			
4.13	If "exit" is a menu choice, does it always appear at the bottom of the list?			
4.14	Are menu titles either centered or left-justified?			
4.19	Are field labels consistent from one data entry screen to another?			
4.20	Are fields and labels left-justified for alpha lists and right-justified for numeric lists?			
4.22	Are attention-getting techniques used with care?			
4.24	Size: up to four sizes			
4.25	Font: up to three			
4.26	Blink: two to four hertz			
4.27	Color: up to four (additional colors for occasional use only)			

4.29	Are attention-getting techniques used only for exceptional conditions or for time-dependent information?			
4.30	Are there no more than four to seven colors, and are they far apart along the visible spectrum?			
4.31	Is a legend provided if color codes are numerous or not obvious in meaning?			
4.32	Have pairings of high-chroma, spectrally extreme colors been avoided?			
4.33	Are saturated blues avoided for text or other small, thin line symbols?			
4.34	Is the most important information placed at the beginning of the prompt?			
4.47	Is the method for moving the cursor to the next or previous field consistent throughout the system?			
4.51	Are high-value, high-chroma colors used to attract attention?			

5. Help Users Recognize, Diagnose, and Recover From Errors

Error messages should be expressed in plain language (NO CODES).

#	Review Checklist	Yes	No	Comments
5.1	Is sound used to signal an error?			
5.2	Are prompts stated constructively, without overt or implied criticism of the user?			
5.3	Do prompts imply that the user is in control?			
5.4	Are prompts brief and unambiguous?			
5.5	Are error messages worded so that the system, not the user, takes the blame?			
5.6	If humorous error messages are used, are they appropriate and inoffensive to the user population?			
5.7	Are error messages grammatically correct?			
5.8	Do error messages avoid the use of exclamation points?			
5.9	Do error messages avoid the use of violent or hostile words?			
5.11	Do all error messages in the system use consistent grammatical style, form, terminology, and abbreviations?			
5.12	Do messages place users in control of the system?			

6. Error Prevention

Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

#	Review Checklist	Yes	No	Comments
6.4	Are menu choices logical, distinctive, and mutually exclusive?			
6.6	If the system displays multiple windows, is navigation between windows simple and visible?			
6.11	Does the system prevent users from making errors whenever possible?			

7. Recognition Rather Than Recall

Make objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

#	Review Checklist	Yes	No	Comments
7.1	For question and answer interfaces, are visual cues and white space used to distinguish questions, prompts, instructions, and user input?			
7.2	Does the data display start in the upper-left corner of the screen?			
7.5	Are prompts, cues, and messages placed where the eye is likely to be looking on the screen?			
7.6	Have prompts been formatted using white space, justification, and visual cues for easy scanning?			
7.7	Do text areas have "breathing space" around them?			
7.8	Is there an obvious visual distinction made between "choose one" menu and "choose many" menus?			
7.9	Have spatial relationships between soft function keys (on-screen cues) and keyboard function keys been preserved?			
7.10	Does the system gray out or delete labels of currently inactive soft function keys?			
7.11	Is white space used to create symmetry and lead the eye in the appropriate direction?			
7.12	Have items been grouped into logical zones, and have headings been used to distinguish between zones?			

7.13	Are zones no more than twelve to fourteen characters wide and six to seven lines high?			
7.14	Have zones been separated by spaces, lines, color, letters, bold titles, rules lines, or shaded areas?			
7.21	Are size, boldface, underlining, color, shading, or typography used to show relative quantity or importance of different screen items?			
7.22	Are borders used to identify meaningful groups?			
7.23	Has the same color been used to group related elements?			
7.24	Is color coding consistent throughout the system?			
7.25	Is color used in conjunction with some other redundant cue?			
7.26	Is there good color and brightness contrast between image and background colors?			
7.27	Have light, bright, saturated colors been used to emphasize data and have darker, duller, and desaturated colors been used to de-emphasize data?			
7.28	Is the first word of each menu choice the most important?			
7.36	Do GUI menus offer affordance: that is, make obvious where selection is possible?			

8. Flexibility and Minimalist Design

Accelerators-unseen by the novice user-may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions. Provide alternative means of access and operation for users who differ from the "average" user (e.g., physical or cognitive ability, culture, language, etc.)

#	Review Checklist	No	Yes	Comments
8.11	If the system uses a pointing device, do users have the option of either clicking on fields or using a keyboard shortcut?			
8.12	Does the system offer "find next" and "find previous" shortcuts for database searches?			
8.13	On data entry screens, do users have the option of either clicking directly on a field or using a keyboard shortcut?			
8.14	On menus, do users have the option of either clicking directly on a menu item or using a keyboard shortcut?			
8.15	In dialog boxes, do users have the option of either clicking directly on a dialog box option or using a keyboard shortcut?			

8.16	Can expert users bypass nested dialog boxes with either type-ahead, user-defined macros, or keyboard shortcuts?			

9. Aesthetic and Minimalist Design

Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

#	Review Checklist	Yes	No	Comments
9.1	Is only (and all) information essential to decision making displayed on the screen?			
9.2	Are all icons in a set visually and conceptually distinct?			
9.3	Have large objects, bold lines, and simple areas been used to distinguish icons?			
9.4	Does each icon stand out from its background?			
9.6	Are meaningful groups of items separated by white space?			
9.7	Does each data entry screen have a short, simple, clear, distinctive title?			
9.8	Are field labels brief, familiar, and descriptive?			
9.9	Are prompts expressed in the affirmative, and do they use the active voice?			
9.10	Is each lower-level menu choice associated with only one higher level menu?			
9.11	Are menu titles brief, yet long enough to communicate?			
9.12	Are there pop-up or pull-down menus within data entry fields that have many, but well-defined, entry options?			

10. Help and Documentation

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

#	Review Checklist	Yes	No	Comments

10.1	If users are working from hard copy, are the parts of the hard copy that go on-line marked?			
10.2	Are on-line instructions visually distinct?			
10.3	Do the instructions follow the sequence of user actions?			
10.4	If menu choices are ambiguous, does the system provide additional explanatory information when an item is selected?			
10.5	Are data entry screens and dialog boxes supported by navigation and completion instructions?			
10.8	Is the help function visible; for example, a key labeled HELP or a special menu?			
10.10	Navigation: Is information easy to find?			
10.11	Presentation: Is the visual layout well designed?			
10.12	Conversation: Is the information accurate, complete, and understandable?			
10.13	Is the information relevant?			
10.14	Goal-oriented (What can I do with this program?)			
10.15	Descriptive (What is this thing for?)			
10.16	Procedural (How do I do this task?)			
10.17	Interpretive (Why did that happen?)			
10.18	Navigational (Where am I?)			
10.19	Is there context-sensitive help?			
10.21	Can users easily switch between help and their work?			
10.22	Is it easy to access and return from the help system?			
10.23	Can users resume work where they left off after accessing help?			

11. Skills

The system should support, extend, supplement, or enhance the user's skills, background knowledge, and expertise ----not replace them.

#	Review Checklist	Yes	No	Comments

11.2	Are window operations easy to learn and use?			
11.7	Are users the initiators of actions rather than the responders?			
11.13	Can users move forward and backward within a field?			
11.14	Is the method for moving the cursor to the next or previous field both simple and visible?			
11.16	Do the selected input device(s) match user capabilities?			
11.22	Does the system correctly anticipate and prompt for the user's probable next activity?			

12. Pleasurable and Respectful Interaction with the User

The user's interactions with the system should enhance the quality of her or his work-life. The user should be treated with respect. The design should be aesthetically pleasing- with artistic as well as functional value.

#	Review Checklist	Yes	No	Comments
12.1	Is each individual icon a harmonious member of a family of icons?			
12.2	Has excessive detail in icon design been avoided?			
12.3	Has color been used with discretion?			
12.4	Has the amount of required window housekeeping been kept to a minimum?			
12.5	If users are working from hard copy, does the screen layout match the paper form?			
12.6	Has color been used specifically to draw attention, communicate organization, indicate status changes, and establish relationships?			
12.7	Can users turn off automatic color coding if necessary?			
12.8	Are typing requirements minimal for question and answer interfaces?			
12.9	Do the selected input device(s) match environmental constraints?			
12.13	If the system uses multiple input devices, has hand and eye movement between input devices been minimized?			
12.14	If the system supports graphical tasks, has an alternative pointing device been provided?			
12.15	Is the numeric keypad located to the right of the alpha key area?			

12.16	Are the most frequently used function keys in the most accessible positions?			
12.17	Does the system complete unambiguous partial input on a data entry field?			

13. Privacy

The system should help the user to protect personal or private information- belonging to the user or his/her clients.

#	Review Checklist	Yes	No	Comments
13.1	Are protected areas completely inaccessible?			
13.2	Can protected or confidential areas be accessed with certain passwords?			