Logging will store all events in a CSV file and all events will have the following:

* **Record Number:** The unique number the event that occurred. 1 is the first event and n is the last event
* **Time Stamp:** The number of seconds since January 1st, 2001 that the event occurred
* **Desc ID:** Each generic message has an associated ID
* **Message Description:** The generic textual message related to the Description ID
* **Object ID:** The ID number of the object (variable, causal link, loop) that the event is related to. If the object ID is 0, that means the event was a generic application event not specific to any object in the model.
* **Details:** Any details related to the message that helps provide a better picture of what happened in the event

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| **ID** | **Message Description** | **Explanation/What is included in the Details** | **Picture Describing the message** |
| 0 | "The application has loaded." |  |  |
| 1 | "The application has been placed in the background." |  |  |
| 2 | "The application has been resumed." |  |  |
| 3 | "The application has been killed." | Either the user killed the application or Apple killed the app because it needed resources |  |
| 4 | "The application has received a memory warning." |  |  |
| 5 | "User changed the device's orientation." | Specifies: Face Up, Face Down, Portrait, Portrait Upside Down, Landscape Left, Landscape Right  Face up is when the iPad is sitting completely flat and face down is when the screen is lying completely flat with the screen facing the ground |  |
| 6 | "Imported a causal link from a file." | Will list all attributes associated with the causal link, including parent and child variables, line thickness, polarity, time delay, and color |  |
| 7 | "User changed the color of a causal link." | Will list the previous color, and the new color. Colors include: Black, Blue, Green, Red, and Orange.  Occurs when the user presses save on the edit menu and the value has changed. |  |
| 8 | "User changed the polarity of a causal link." | Will list the previous polarity and the new polarity. Polarities include: + and -.  Occurs when the user presses save on the edit menu and the value has changed. |  |
| 9 | "User changed the thickness of a causal link." | Will list the previous thickness and the new thickness. Thicknesses include: Normal, Bold.  Occurs when the user presses save on the edit menu and the value has changed. |  |
| 10 | "User changed the time delay of a causal link." | Will list the previous time delay value and the new value. Valid values include yes or no.  Occurs when the user presses save on the edit menu and the value has changed. |  |
| 11 | "User selected a new option for the link time delay." | Will specify which option was selected. Yes or No.  This event occurs whether or not the change is saved. |  |
| 12 | "User selected a new option for the link thickness." | Will specify which option was selected. Normal or Bold.  This event occurs whether or not the change is saved. |  |
| 13 | "User selected a new option for the link polarity." | Will specify which option was selected. + or -.  This event occurs whether or not the change is saved. |  |
| 14 | "User selected a new option for the link color." | Will specify which option was selected. Black, Red, Green, Blue, Orange.  This event occurs whether or not the change is saved. |  |
| 15 | "User began moving a causal link." | x, y coordinate of the vertex of the causal link. This is where the handle is located |  |
| 16 | "User is moving a causal link." | x, y coordinate of the vertex of the causal link. This is where the handle is located |  |
| 17 | "User stopped moving a causal  link." | x, y coordinate of the vertex of the causal link. This is where the handle is located |  |
| 18 | “Failed sending data to Parse.” | There was an issue saving data to Parse. Details will specify if the error was because the user of the device could not be identified, if a new unique file id could not be created. If both of those issues do not exist and Parse still has trouble uploading data, the details will contain the ending hash of the model file |  |
| 19 | "Keyboard opened." | Keyboard will open when a user clicks inside a text field to update a name of a variable or a name of a loop.  Event will specify what the keyboard was opened for changing. |  |
| 20 | "Keyboard closed." | Keyboard will close when the user presses the Done button on the keyboard, the save or cancel button on the edit menu or somewhere on the screen. |  |
| 21 | "Imported a loop from a file." | Will list all attributes associated with the loop, including comment and symbol. |  |
| 22 | "User changed the name of a loop." | Will state the old comment for the loop and what the user changed the comment to.  This will occur when the user presses save on the edit menu and the value has changed. |  |
| 23 | "User changed the loop symbol." | Will state the old symbol for the loop and what the user changed the symbol to. Symbols include Clockwise and Counter Clockwise.  This will occur when the user presses save on the edit menu and the value has changed. |  |
| 24 | "User selected a new option for the loop symbol." | Will specify which option was selected. Counter Clockwise or Clockwise.  This event occurs whether or not the change is saved. |  |
| 25 | "User began moving a loop." | x, y coordinate of the center of the loop |  |
| 26 | "User is moving a loop." | x, y coordinate of the center of the loop |  |
| 27 | "User stopped moving a loop." | x, y coordinate of the center of the loop |  |
| ~~28~~ | ~~"The model design window has been opened."~~ | ~~Not used right now~~ |  |
| ~~29~~ | ~~"The help section window has been opened."~~ | ~~Not used right now~~ |  |
| ~~30~~ | ~~"Left side menu closed."~~ | ~~Not used right now~~ |  |
| 31 | "A deleted variable caused deletion of causal links." | When a variable is deleted any causal links going inbound or outbound are also deleted.  Will list the number of causal links deleted. Will provide the causal link id as well as the causal link’s parent and child names and ids. |  |
| 32 | "Variable added." |  |  |
| 33 | "Loop added." |  |  |
| 34 | "User begins scrolling." | x, y coordinate of the upper left corner of the screen |  |
| 35 | "Window is scrolling." | x, y coordinate of the upper left corner of the screen |  |
| 36 | "User stopped scrolling." | x, y coordinate of the upper left corner of the screen.  At this event, the user could have swiped the screen, meaning the window could still be moving, but the user is no longer touching the screen |  |
| 37 | "Scrolling window stopped moving." | x, y coordinate of the upper left corner of the screen |  |
| 38 | "User warned that they are about to create a new model." |  | 🡪 |
| 39 | "User cancelled out of creating a new model." |  |  |
| 40 | "User created a new model." |  |  |
| 41 | ~~"Left side menu opened."~~ | ~~Not used right now~~ |  |
| 42 | "User pressed the create image of model button." |  |  |
| 43 | "Image of model saved." | The image was saved to the photo album. |  |
| 44 | "Image of model not successfully saved." | The image was not saved to the photo album. |  |
| 45 | "User notified that the image was not saved." |  |  |
| 46 | "User notified that the image was saved." |  |  |
| 47 | “User confirmed that the image was saved.” |  |  |
| 48 | “User confirmed that the image was not saved.” |  |  |
| 49 | "User pressed the save model button." |  |  |
| 50 | "Redirecting to external application to save." | Lists the name of the application being redirected to. |  |
| 51 | "The save model options window has opened." |  |  |
| 52 | "The save model options window has been closed." | Window will close when a user selects on an option or clicks somewhere off of the window |  |
| 53 | "User has requested to open a file." |  |  |
| 54 | "User tried to open a file without a .mdl extension." | The name of the file the user tried to open is listed |  |
| 55 | “User confirmed that they opened an invalid file. |  |  |
| 56 | "User selected a .mdl file to open." | Will list the name of the file selected to be loaded |  |
| 57 | "User cancelled request to open a file." | User got redirected to Dropbox to open a file, but pressed the cancel button in Dropbox |  |
| 58 | "Update menu displayed." | Occurs when the menu that gives the user the option to edit or delete an object is displayed.  Will specify if the object associated with the event is a variable, causal link or a loop. |  |
| 59 | "Update menu closed." | Occurs when the user clicks on the edit or delete option as well as if the user clicks off of the update menu.  Will specify if the object associated with the event is a variable, causal link, or a loop. |  |
| 60 | "Edit menu displayed." | Occurs when the edit menu opens up for a variable, causal link, or loop.  Details will specify which menu opened. (variable, causal link, loop) | 🡪 |
| 61 | "Edit menu closed because user saved changes." | This will be called when a variable, causal link, or loop edit menu save button was pressed.  Details will specify which menu was saved (variable, causal link, loop) |  |
| 62 | "Edit menu closed because user cancelled." | This will be called when a variable, causal link, or loop edit menu cancel button was pressed or the user clicks somewhere off the menu.  Details will specify which menu was cancelled. (variable, causal link, loop) |  |
| 63 | "User warned that they are about to delete something." | Details will specify which object may be deleted. (variable, causal link, loop) | 🡪 |
| 64 | "User cancelled out of deleting" | Details will specify which delete menu was cancelled. (variable, causal link, loop |  |
| 65 | "A variable was deleted." | Deleting a variable will also delete any causal links that were attached to it. That will be handled in a separate message |  |
| 66 | "A loop was deleted." |  |  |
| 67 | "A causal link was deleted." |  |  |
| 68 | "User selected a new option for adding new objects." | Will be either variable, causal link, or loop |  |
| 69 | “There is internet connection!” |  |  |
| 70 | “There is NO internet connection!” |  |  |
| 71 | "Imported a variable from a file." | Will list all attributes associated with the variable, including name and type. |  |
| 72 | "User changed the name of a variable." | Will list the previous name, and the new name.  Occurs when the user presses save on the edit menu and the value has changed. |  |
| 73 | "User changed the variable type." | Will list the previous type, and the new type. Types include: Normal and boxed  Occurs when the user presses save on the edit menu and the value has changed. |  |
| 74 | "User selected a new option for the variable type." | Will specify which option was selected. Normal or bold.  This event occurs whether or not the change is saved. |  |
| 75 | "User has begun creating a new causal link." | x,y coordinate of where the user’s finger is located |  |
| 76 | "The causal link is in the process of being added." | x,y coordinate of where the user’s finger is located |  |
| 77 | "Causal link added." | Will list the parent and child variable name and id. |  |
| 78 | "User cancelled adding a new causal link." | Occurs when a user starts dragging a new causal link and lets go of their finger when it is not on a another variable |  |
| 79 | "User began moving a variable." | x, y coordinate of the center of the variable |  |
| 80 | "User is moving a variable." | x, y coordinate of the center of the variable |  |
| 81 | "User stopped moving a variable." | x, y coordinate of the center of the variable |  |