**Team 12 Feathersoft CRC**

**Classes:**

SRS section 3.2.2 describes the following classes of related real-world objects in the system. Real world objects identify physical or conceptual components of the system:

* Event Configuration
* Log File
* Enforcement Action Report
* Vector
* Significant Log Entry
* Node
* Relationship
* Icon
* Graph
* Vector Manager
* Log Entries Manager
* User Manager
* User
* Ingestion Handler
* Validation Handler

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| **Concrete Class: Vector Manager** | |
| **Responsibilities (Does):**   * [SRS 82] Compare Vector DB differences between Lead and Non-Lead * [SRS 83] Download Vector and Graph from Lead Vector DB to user’s Vector DB * [SRS 84] Upload Vector and Graph from user’s Vector DB to Lead approval status page * Load Vector from Local Storage * Download copy (Saving) of Vector to Local Storage * Load history of changes made in the Vector DB | **Collaborators:**  The Vector Manager (Client) class will collaborate with Event Configuration (Server) to gain access to its attributes.  The Vector Manager class (Client) receives log entries attributes from Significant Log Entry class (Server).  The Vector Manager class (Client) receives Graph attributes from Graph class (Server)  The Vector Manager class (Client) receives Vector attributes from Vector class (Server) |

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| **Concrete Class: Event Configuration** | |
| **Responsibilities (Knows):**   * [SRS 35] Knows event name. * [SRS 35] Knows event description. * [SRS 35] Knows event start timestamp. * [SRS 35] Knows event end timestamp. * [SRS 35] Knows root directory. * [SRS 35] Knows red team folder. * [SRS 35] Knows white team folder. * [SRS 35] Knows blue team folder. * [SRS 35] Knows where the master vector DB is stored. * [SRS 35] Knows lead’s IP address. * [SRS 35] Knows the number of established connections to the host machine.   **Responsibilities (Does):**   * [SRS 61-64] Check directory structure. | **Collaborators:**   * The Event Configuration class is a (Server) class that gives attributes to the Manager class (Client). * The Event Configuration class (Server) gives the directory attributes to the Log File class (Client). * The Event Configuration is a client of the user manager class who tells it how many users are connected. |

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| **Log File** | |
| **Responsibilities (Knows):**   * [SRS 35] Knows the log file name. * [SRS 35] Knows the cleansing status of a log file. * [SRS 35] Knows the validation status of a log file. * [SRS 35] Knows the ingestion status of a log file. * [SRS 35] Knows the acknowledgement status of a log file. * [SRS 66] Knows audio transcribed text in one- minute intervals. * [SRS 66] Knows transcribed text from audio extracted from video in one-minute intervals. * [SRS 66] Knows extracted text from images. * [SRS 66] Knows extracted text from pdf files. * [SRS 66] Knows start date, end date, start timestamp, and end timestamp. | **Collaborators**:   * A Log File class (Client) in the system depends upon the directory attributes provided by the Event Configuration class (Server). * A Log File class (Server) in the system provides the status attributes and transcriptions to the Enforcement Action Report (Client) |

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| **Enforcement Action Report** | |
| **Responsibilities (Knows):**   * [SRS 39] Knows where an error occurs in a log file. * [SRS 39] Knows why a specific line in the log file failed the validation test. | **Collaborators**:  A Log File class (Server) in the system provides the status attributes and transcriptions to the Enforcement Action Report (Client) |

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| **Vector** | |
| **Responsibilities (Knows):**   * [SRS 40] Knows its name * [SRS 40] Knows its description | **Collaborators**:  A Vector class (Server) provides the name attribute for the Significant Log Entry class (Client) for association. |

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| **Significant Log Entry** | |
| **Responsibilities (Knows):**   * [SRS 42] Knows the log entry number. * [SRS 42] Knows the timestamp. * [SRS 42] Knows the log entry content. * [SRS 42] Knows the name of the log file from which it originates. * [SRS 42] Knows the path of the log file from which it originates. * [SRS 42] Knows the host / IP address. * [SRS 42] Knows the source type.   **Responsibilities (Does):**   * Associates a log entry to at least one vector. | **Collaborators:**  A Vector class (Server) provides the name attribute for the Significant Log Entry class (Client) for association.  The Manager class (Client) receives log entries attributes from Significant Log Entry class (Server). |

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| **Node** | |
| **Responsibilities (Knows)**:   * [SRS 44] Knows its ID * [SRS 44] Knows its name * [SRS 44] Knows its description * [SRS 44] Knows its log entry reference * [SRS 44] Knows its log creator * [SRS 44] Knows its event type * [SRS 44] Knows its icon type * [SRS 44] Knows its source * [SRS 44] Knows its visibility | **Collaborators**:  Significant Log Entry is a (Server) class that provides log entry attributes to the Node class (Client)  Relationship is a class (Client) that receives the source and destination attributes of the Nodes class (Server) to display.  Icon is a class (Server) that provides the type attributes to the Node class (Client).  A Graph class (Client) will receive the attributes inside Node (Server) to display. |

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| **Relationship** | |
| **Responsibilities (Knows)**:   * [SRS 47] Know its relationship ID * [SRS 47] Know its parent ID (source node of the relationship) * [SRS 47] Knows its child ID. * [SRS 47] Knows its label. | **Collaborators**:  A relationship is a client of the node class because it makes references to the parent (source) and child (destination) nodes.  Graph is a client of relationship because the positions of the relationship will be used to place them on the graph. |

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| **Icon** | |
| **Responsibilities (Knows):**   * [SRS 49] Knows the path to an image. * [SRS 49] Knows the icon name.   **Responsibilities (Does):**   * Provides icon to the node class. | **Collaborators:**  Icon is a class (Server) that provides the type attributes to the Node class (Client). |

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| **Graph** | |
| **Responsibilities (Does):**   * [SRS 85] Adds nodes * [SRS 92] Edit nodes * [SRS 89] Delete nodes * [SRS 86] Adds relationships * [SRS 94] Edit relationships * [SRS 87] Remove relationships * [SRS 100] Change icons * [SRS 101] Add icons * [SRS 103] Move nodes * [SRS 102] Delete icons * [SRS 88, SRS 90] Handle errors when trying to delete relationships/nodes * [SRS 93, SRS 95] Handle errors when trying to edit nodes/relationships * [SRS 91] Filter nodes and relationships * [SRS 96] Export an image of the graph * [SRS 97] Undo changes * [SRS 98] Save changes * [SRS 99] Keep track of a change list   **Responsibilities (Knows)**   * [SRS 50] Know Export format * [SRS 50] Know Orientation * [SRS 50] Know Interval units * [SRS 50] Know Interval * [SRS 50] Know Position of nodes * [SRS 50] Know Position of relationships | **Collaborators**:  Node is a server of the graph. It provides its attributes for display and modification purposes  A graph is a client of the relationship class because it uses the positions of a relationship to display them. |

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| **Log Entries Manager** | |
| **Responsibilities (Does):**   * Updates existing log entries if changes occurred to original log files. * Saves updated log entries to local storage. | **Collaborators:**   * The log entries manager is a client of the log file class. * The log entries manager is a client of the log entries class. |

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| **User Manager** | |
| **Responsibilities (Does):**   * Responsible for managing the number of connected users. * Listens for incoming user connections to the server. * Updates event configuration if there is a change in the number of connected users. (E.g. A user closes the application). * Differentiates the IP addresses between Lead and Non - Lead User   **Responsibilities (Knows):**   * The current I.P. addresses connected to the system. * The number of users connected to the system. | **Collaborators:**   * The User Manager is a (client) of the user class. * The User Manager is a (server) of the Event Configuration which knows how many users are connected. |

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| **User** | |
| **Responsibilities (Knows):**   * The IP address of the User * Knows if the User is a Lead for the | **Collaborators:**   * The User is a (Server) of the User Manager class by providing the IP address of users |

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| **Validation Handler** | |
| **Responsibilities (Does):**   * Check that the log files contain a timestamp per line * Check that log file contain timestamps that are bounded by the start data, end date, start time, and end time specified in the event configuration. * If the log file is of type CVS and the originator of the log file is from the white team, check that the log file contains timestamps that are within Lower limit of the range and Upper limit of the range * Certify log files as validated log file. * Change status of log file to pass or fail. | **Collaborators:**   * The Validation Handler class is a (client) of the Log File class. * The Validation Handler class is a (Client) of the Event Configuration class. |

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| **Ingestion Handler** | |
| **Responsibilities (Does):**   * Transcribe audio Log Files into text * Translate Image Log Files into text * Transcribe Video Log Files into text * Create log files with same source of ingested log files * Cleanse Log Files from unwanted characters if log file is of type TMUX * Cleanse Log Files from blank rows if the log file is of type CVS * Create cleanse certification for Log Files | **Collaborators:**   * The Ingestion class is a (client) of the Log File class. |