CLAIMS

1. A computer-implemented method for implementing one or more rules for use with an application that includes a process portion, a version control portion, and an editor portion in a data processing system, the method including:

storing multiple versions of a rule in a system storage, in which the rule includes one or more rule cases that specify one or more values for the rule's output depending on the rule's input, and each rule case includes one or more input relationships in which the rule case is triggered by a given input record if one or more data values of the given input record meet the one or more input relationships;

wherein each version of the rule is configured to be associated with a plurality of states including a first state and a second, different state of the plurality of states;

storing one or more records that are each shared by the process portion, the version control portion, and the editor portion;

receiving instructions through a user interface that integrates, through the shared one or more records, the process portion, the version control portion, and the editor portion, with the process portion being presented in a first user interface portion, the version control portion being presented in a second user interface portion, and the editor portion being presented in a third user interface portion;

wherein the third user interface portion displays one or more tables with rows and columns, wherein the one or more tables represent a particular version of the rule and one or more of the rows represent a particular rule case;

in response to the receiving of the instructions, executing the received instructions, the executing of the received instructions including:

selecting, by the version control portion of the application, the particular version of the rule from the multiple versions of the rule stored in the system storage;

modifying, through the editor portion of the application, the particular version of the rule;

updating, at least one of the one or more stored records, with data specifying that the particular version of the rule is modified; and

based on the updating, transitioning, by the process portion of the application, the particular version of the rule from the first state of the plurality of states to the second, different state of the plurality of states; and

storing, in one of the one or more records shared by the version control portion of the application, the process portion of application, and the editor portion, information resulting from the executing of the instructions received through the user interface that integrates the version control, editor and process portions.

2. The method of claim 1, wherein the information resulting from the executing of the instructions includes the rule with the selected particular version and with the second state of the plurality of states.

3. The method of claim 1, wherein the process portion of the application is distinct from the version control portion of the application, and wherein the process portion of the application and the version control portion of the application are not configured to transmit data to each other and to receive data from each other.

4. The method of claim 1, wherein the process portion of the application is executed on a first server computer and the version control portion of the application is executed on a second server computer.

5. The method of claim 1, wherein the received instructions include one or more state instructions received through the process portion of the application presented in the first user interface portion and one or more version instructions received through the version control portion of the application presented in the second interface portion, and wherein:

the selecting, by the version control portion of the application, of the particular version of the rule from the multiple versions of the rule stored in the system storage is performed in response to the receiving of the one or more version instructions specifying the particular version; and

the transitioning, by the process portion of the application, of the particular version of the rule from the first state of the plurality of states to the second, different state of the plurality of states is performed in response to the receiving of the one or more state instructions specifying the state transition.

6. The method of claim 1, wherein the plurality of states are a plurality of states of a development lifecycle or an approval process of the rule.

7. The method of claim 1, further including:

executing, through the integrated user interface, the particular version of the rule in the second, different state by:

receiving, from the version control portion of the application or the process portion of the application, the particular version of the rule;

generating a transform for transforming data based on the particular version of the rule in the second, different state;

providing a data processing component including the transform to a dataflow graph; and

executing the dataflow graph including using the data processing component to apply the transform to data inputted to the dataflow graph.

8. The method of claim 1, wherein:

storing includes storing multiple versions of a ruleset in a system storage, in which the ruleset includes one or more rules, each rule including one or more rule cases that specify one or more values for the rule's output depending on the rule's input, and each rule case includes one or more input relationships in which the rule case is triggered by a given input record if one or more data values of the given input record meet the one or more input relationships;

selecting includes selecting, by the version control portion of the application, a particular version of the ruleset from the multiple versions of the ruleset stored in the system storage; and

transitioning includes transitioning, by the process portion of the application, the particular version of the ruleset from the first state of the plurality of states to the second, different state of the plurality of states.

9. One or more machine-readable hardware storage devices for implementing one or more rules for use with an application that includes a process portion, a version control portion, and an editor portion in a data processing system, the one or more machine-readable hardware storage devices storing instructions that are executable by one or more processors to perform operations including:

storing multiple versions of a rule in a system storage, in which the rule includes one or more rule cases that specify one or more values for the rule's output depending on the rule's input, and each rule case includes one or more input relationships in which the rule case is triggered by a given input record if one or more data values of the given input record meet the one or more input relationships;

wherein each version of the rule is configured to be associated with a plurality of states including a first state and a second, different state of the plurality of states;

storing one or more records that are each shared by the process portion, the version control portion, and the editor portion;

receiving instructions through a user interface that integrates, through the shared one or more records, the process portion, the version control portion, and the editor portion, with the process portion being presented in a first user interface portion, the version control portion being presented in a second user interface portion, and the editor portion being presented in a third user interface portion;

wherein the third user interface portion displays one or more tables with rows and columns, wherein the one or more tables represent a particular version of the rule and one or more of the rows represent a particular rule case;

in response to the receiving of the instructions, executing the received instructions, the executing of the received instructions including:

selecting, by the version control portion of the application, the particular version of the rule from the multiple versions of the rule stored in the system storage;

modifying, through the editor portion of the application, the particular version of the rule;

updating, at least one of the one or more stored records, with data specifying that the particular version of the rule is modified; and

based on the updating, transitioning, by the process portion of the application, the particular version of the rule from the first state of the plurality of states to the second, different state of the plurality of states; and

storing, in one of the one or more records shared by the version control portion of the application, the process portion of application, and the editor portion, information resulting from the executing of the instructions received through the user interface that integrates the version control, editor and process portions.

10. The method of claim 1 or the one or more machine-readable hardware storage devices of claim 9, wherein the one or more shared records are linked to the multiple versions of the rule.

11. The method of claim 1 or the one or more machine-readable hardware storage devices of claim 9, wherein the third user interface portion of the integrated user interface displays plural entries representing a given rule that is associated with a given state of the rule and a given version of the rule, and wherein the process portion of the application is for submitting data specifying a state transition of the given rule, and the version control portion of the application is for specifying a new version of the given rule.

12. The method or the one or more machine-readable hardware storage devices of claim 11, wherein the method or the operations further include:

modifying a given one of the plural entries through the editor portion being presented in the third user interface portion of the integrated user interface;

generating a new rule based on the modified given entry;

saving by the data processing system the new rule as a new version of the given rule; and

automatically updating, by the data processing system, a given record of the one or more shared records with data specifying the new version of the given rule generated and an initial state of the new version of the given rule.

13. The method or the one or more machine-readable hardware storage devices of claim 11, wherein the plural entries are the rows that are rendered in the third user interface portion of the integrated user interface, and with each of the rows including cells, of which one or more cells are modified through a further user interface portion of the integrated user interface, and the version control portion is for specifying the new version of the given rule.

14. The method or the one or more machine-readable hardware storage devices of claim 13, wherein the method or the operations further include:

automatically updating by the data processing system a given record of the one or more shared records, with data specifying the new version of the given rule generated and an initial state of the new version of the given rule, based on actions performed through at least two of the first user interface portion, the second user interface portion, and the third user interface portion of the integrated user interface.

15. The method of claim 1 or the one or more machine-readable hardware storage devices of claim 9, wherein the instructions are first instructions, and the method or the operations further include receiving, through the integrated user interface, second instructions and in response to the receiving of the second instructions, executing the received second instructions, the executing of the received second instructions including:

selecting a group of two or more rules from a plurality of rules stored in the system storage, each rule in the group being a particular version of a plurality of versions of the rules;

associating the group of selected rules with a release tag; and

transitioning the release tag from a first state of a plurality of states to a second state of the plurality of states.

16. The method of claim 1 or the one or more machine-readable hardware storage devices of claim 9, wherein the information resulting from the executing of the instructions includes log information that represents the selecting performed by the version control portion of the application responsive to the received instructions and the transitioning performed by the process portion of the application responsive to the received instructions.

17. The method or the one or more machine-readable hardware storage devices of claim 12, further including receiving a user-initiated selection of simulator portion of the application being presented in a fourth user interface portion of the integrated user interface;

in response to receiving the selection of the simulation portion of the application:

causing, by the simulator portion of the application being accessed by the version control portion of the application, the new rule represented by the entries to execute against a given input data record to perform a simulation of the execution of the new version of the given rule; and

automatically updating, by the data processing system, a given record of the one or more shared records with information resulting from the simulation.

18. The method or the one or more machine-readable hardware storage devices of claim 17, wherein the fourth user interface portion provides visualizations indicative of the simulation currently being performed.

19. The method or the one or more machine-readable hardware storage devices of claim 18, wherein the visualizations includes: input visualizations that indicate input data of the given input data record on which the new rule is executing during the simulation; or visualizations indicating which rule case of the new rule has been triggered during the simulation; or output visualizations indicating output data that results from the execution of the new rule against the given input data record during the simulation.

20. The method or the one or more machine-readable hardware storage devices of claim 17, wherein the information resulting from the simulation includes: data specifying that instructions were received to perform the simulation on the new version of the given rule; or data that is indicative of the results of the simulation.

21. The method or the one or more machine-readable hardware storage devices of claim 18, wherein the visualizations provided by the fourth user interface portion are indicative of the progress of the execution of the new rule in real-time.