Tutorial

This is a user guide on how to set up and run the Dcr-js Editor. And, how to create DCR Graphs models using the tool.

1.1. Set-up

- To model a DCR graph using our dcr-js editor, the first requirement is to clone the applications GitHub repository and run it an IDE (for this project, Visual Studio Code was used) and navigating to the modeler directory.

  ```
  cd modeler
  ```

- Next is the installation of dependencies, execute the following commands:

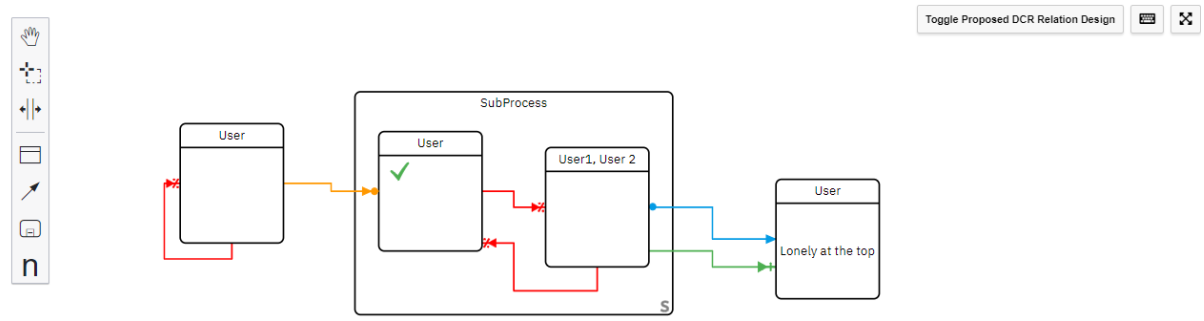
  ```
  npm i
  cd starter
  npm i
  ```

- To run the modeler, execute the following commands:

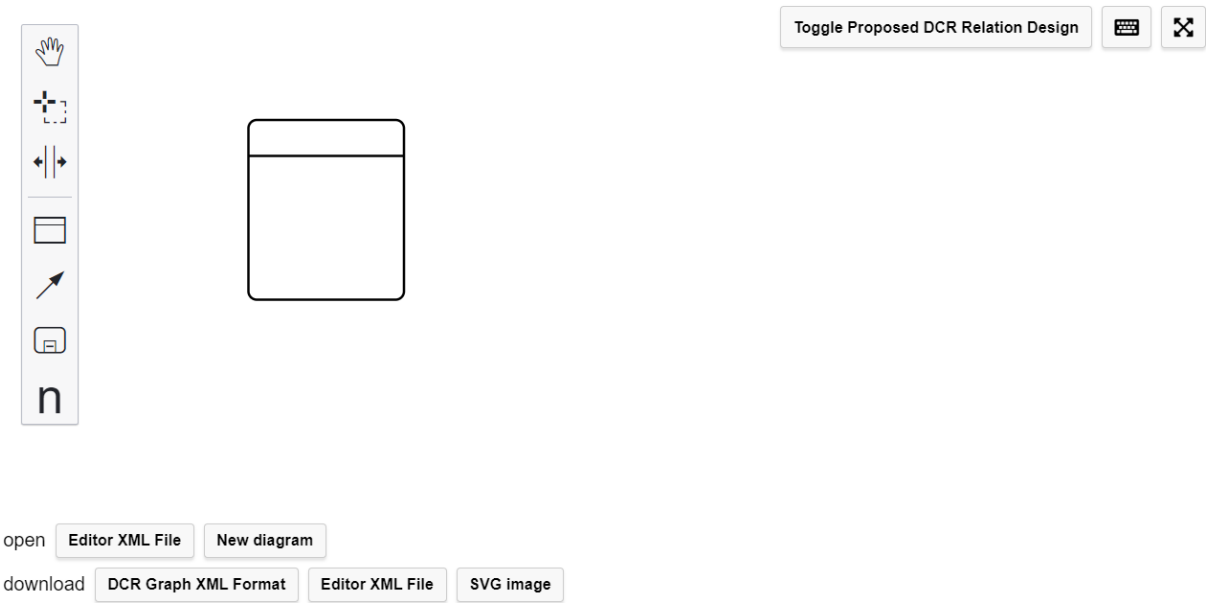
  ```
  cd starter
  npm run dev
  ```

1.2. Modelling

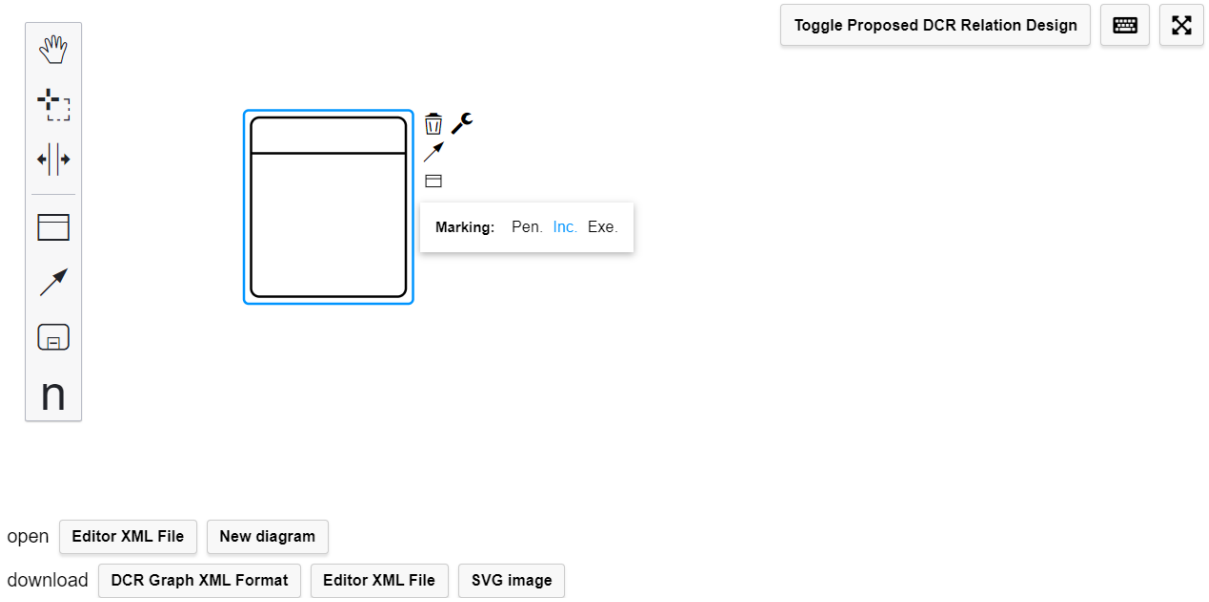
Now to model a DCR graph, we will use the following example:



To render an element onto the can, you first select an element by clicking on the element's icon in the palette panel, then you drag and drop it unto the canvas. This can be done for an unlimited number of times. In our example we, begin by rendering a DCR Event. This is done by clicking the event icon from the palette panel, then dragging and dropping unto the canvas.



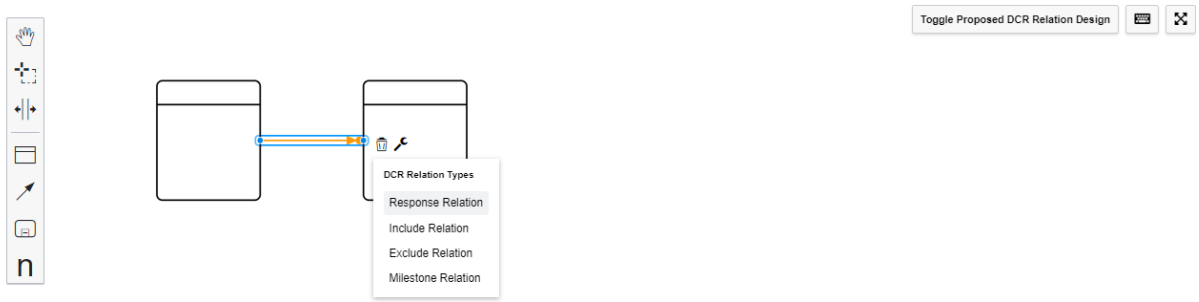
Then we select the rendered event and upon doing that, the selected elements context pad is rendered made available to the user. Elements in the context pad are selected by clicking on the icon in the context pad as the image below shows.

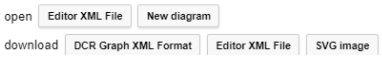


For example, the context pad for a DCR Event has three icons: a trash can to delete the selected element, a DCR Event icon to append a new event to the selected element and a screw-wrench that permits the user apply markings to the selected events by clicking on one or more of the buttons event markings (Pen., Inc, and Exe).

It should be noted that when creating a DCR Relation, a condition relation is rendered as the default and only then can the user select render other relation

types. This is done by clicking on the screw-wrench and a popup menu is rendered from which other options can be chosen.

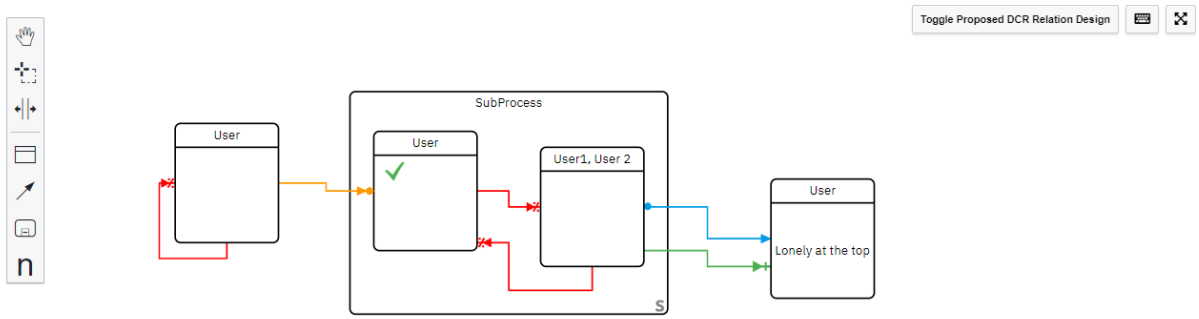


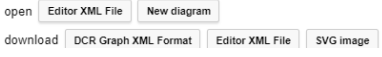


These constitute the basic operations needed to create DCR graphs. By doing this repeatedly, the user can model DCR graphs of varied complexities.

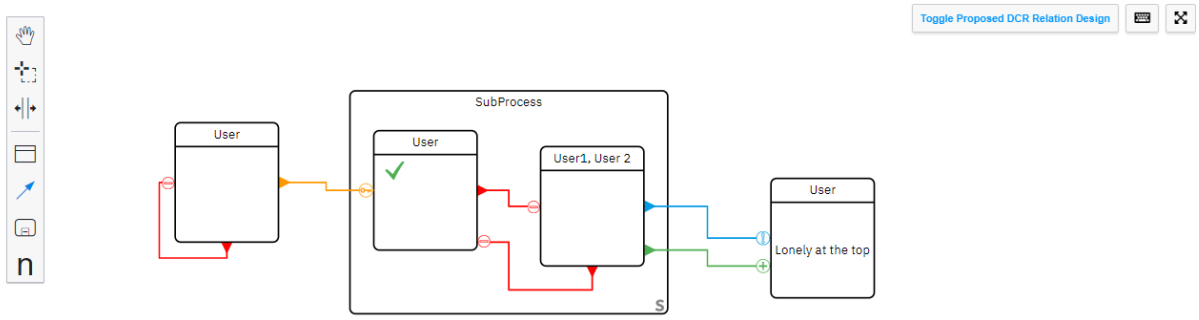
The user via the palette panel can use some of the navigation tools such as the hand tool to move the canvas around and select tool to select multiple elements on the canvas.

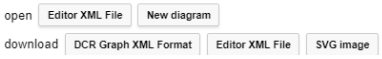
Grouping of events using either of the Event Collections (Nesting, Single-instance Subprocess or Multi-instance Subprocess) is achieved by dragging and dropping arbitrary events onto the chosen event collection. Event collections are resizable by clicking and dragging the borders of the selected event collection.





The tool allows the user model using alternate DCR Relation designs. And this done by simply toggling on the “Toggle Proposed DCR Relation Design” button.





1.3. Exporting of DCR graph models

To export, we simply click on the “Editor XML File” button to save as an XML interchangeable file or the “DCR Graph XML Format” button to save the file in DCR Graph XML format. By clicking the open “Editor XML File” button, the user can import files stored in the XML interchangeable file format. The “New diagram” button when clicked clears the canvas.