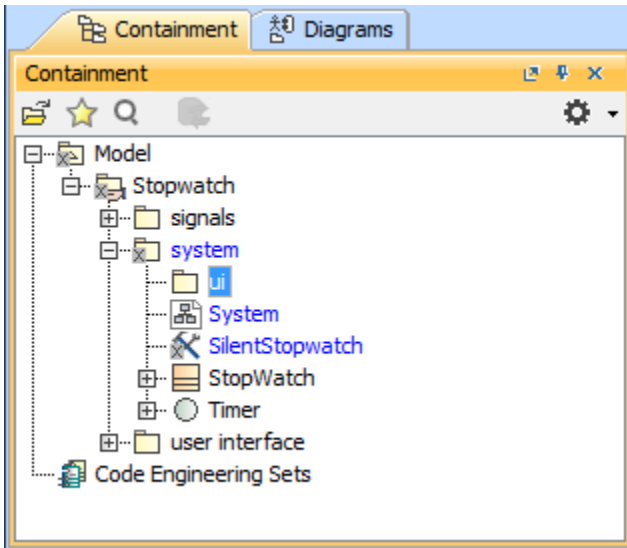


Creating User Interface mockups for the stopwatch model

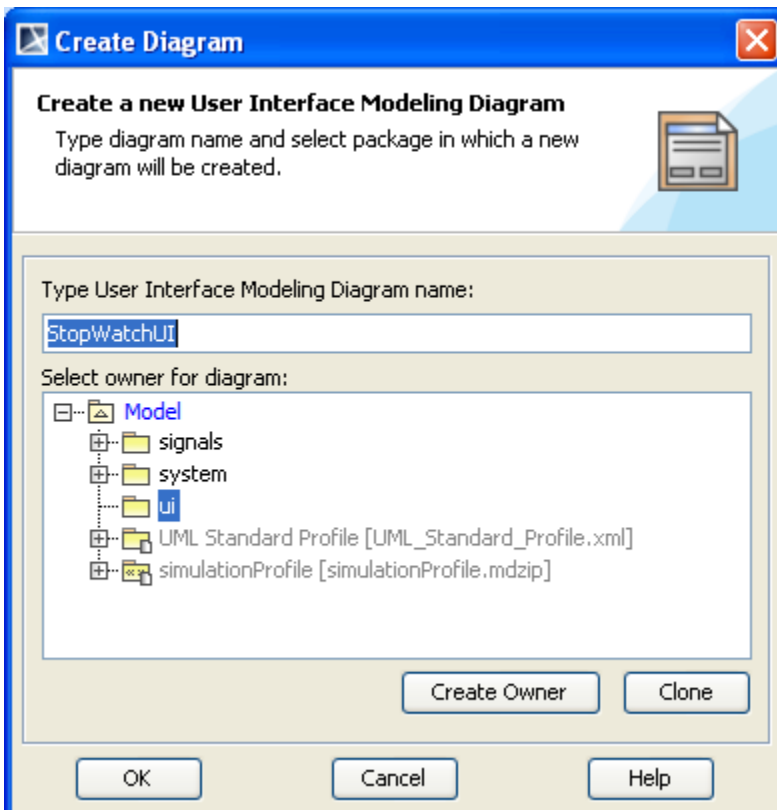
Cameo Simulation Toolkit allows you to use the MagicDraw's User Interface (UI) Modeler to create user interface mockups that will be displayed during model execution. This session shows you how to create a user interface for the stopwatch model. The user interface will be in the form of a panel with buttons to send signals to the runtime object of the stopwatch during model execution. A label will be used to show the runtime time value.

To create user a interface mockup

1. Right-click the **Model** node and select **New Element > Package** to create a new package for the UI Elements.
2. Name the created package "ui".

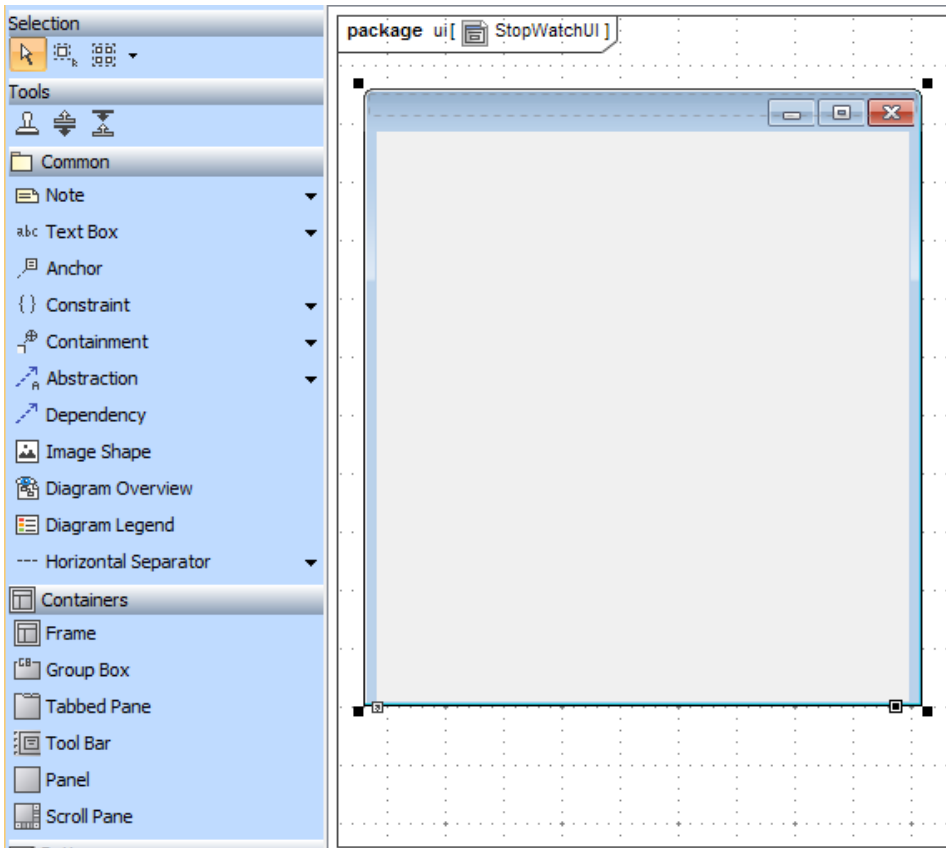


3. Click the button on the Custom Diagram toolbar to create a new **User Interface Modeling Diagram**. The **Create Diagram** dialog will open.
4. Name the diagram "StopWatchUI" and select the **ui** package as the owner of the diagram.

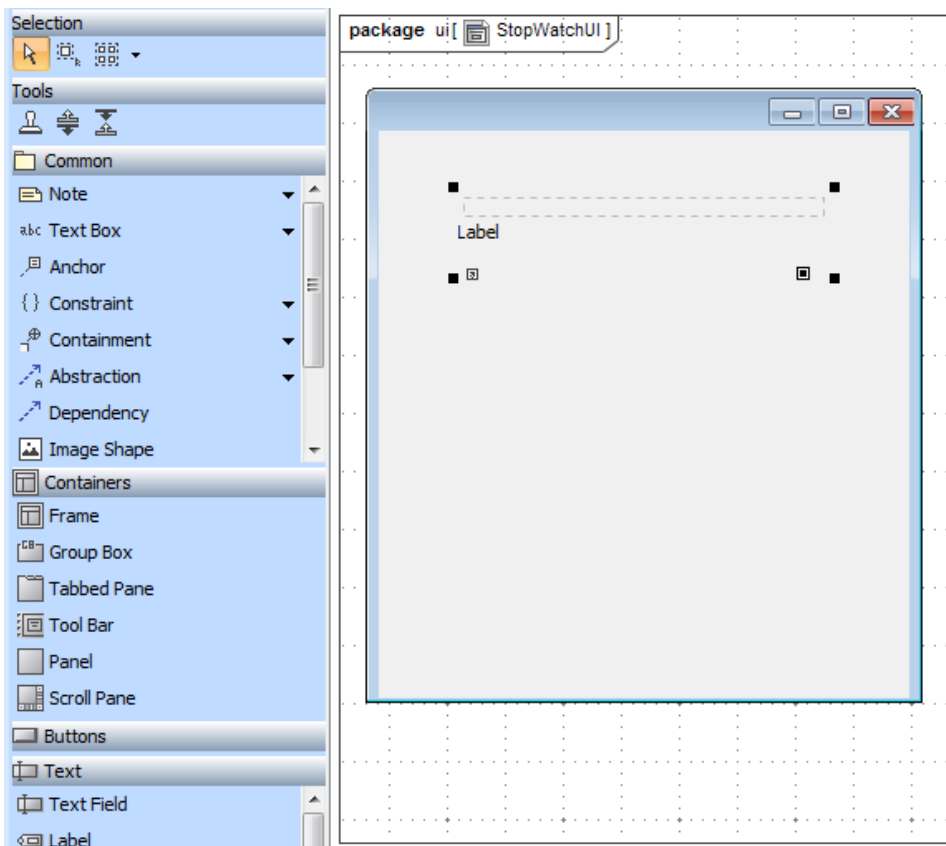


5. Click **OK**.

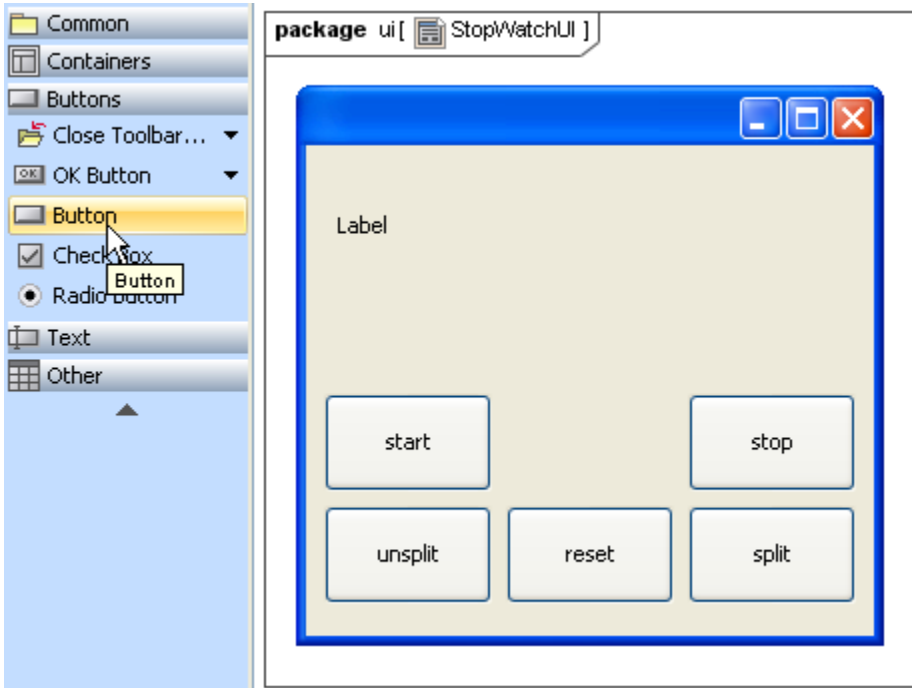
6. Create a new frame for the UI mockup by clicking **Frame** on the User Interface Modeling Diagram toolbar.



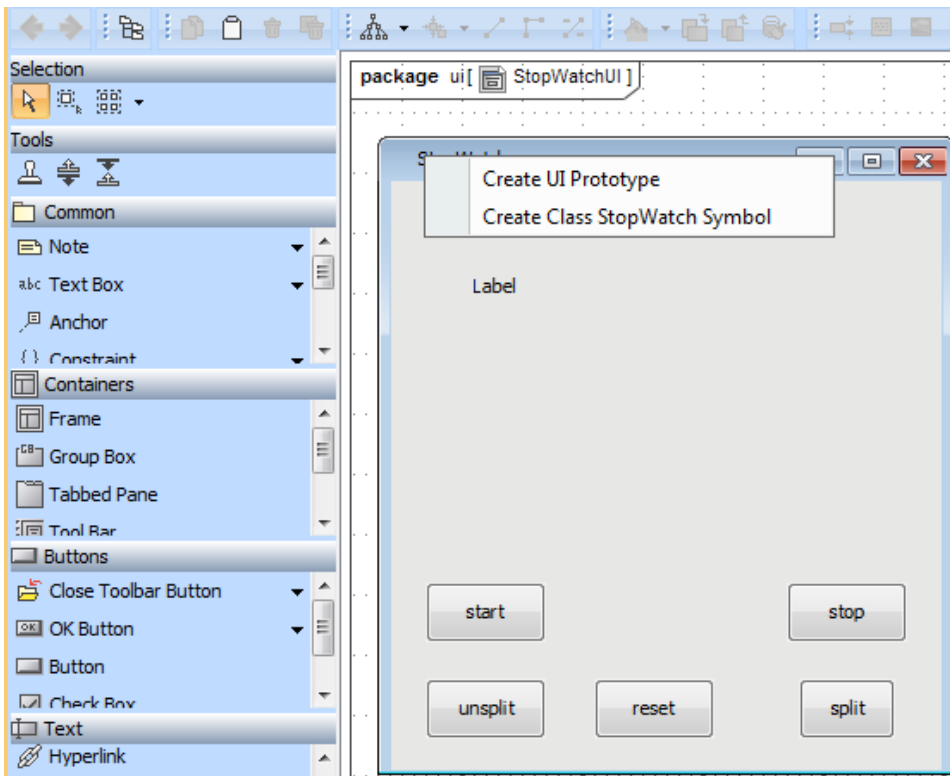
7. Create a label to show the runtime time value by clicking **Label** on the diagram toolbar.



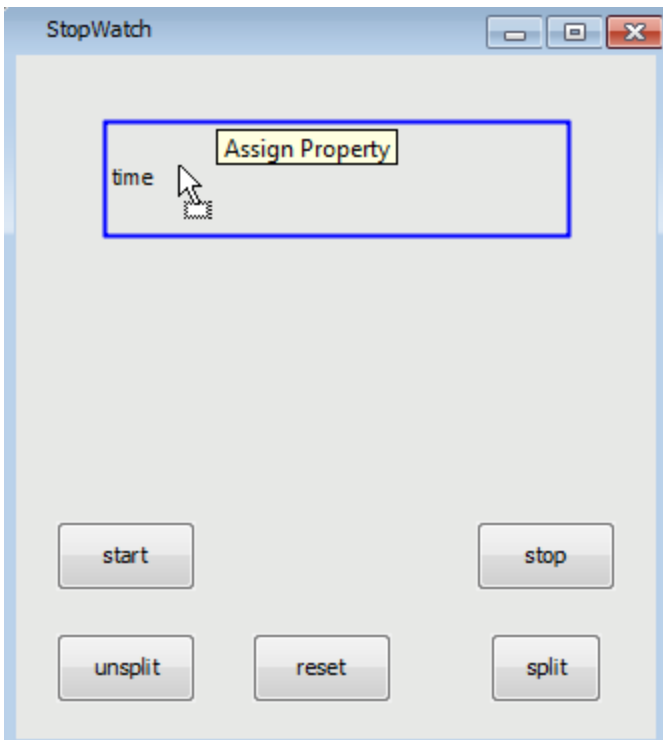
8. Create five buttons to send the signals to the runtime object of the stopwatch model by clicking **Button** on the diagram toolbar.
9. Name the buttons: **Start**, **stop**, **split**, **unsplit**, and **reset**.



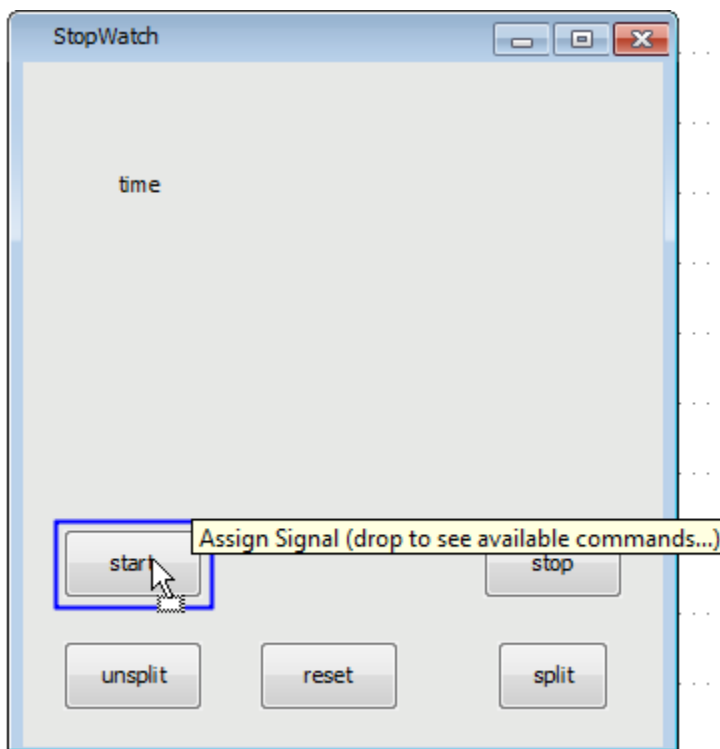
10. Create a UI Prototype by dragging the **StopWatch** Class from the containment browser to the created UI frame on the diagram.



11. Create a Runtime Value Prototype by dragging the **time** property of the **StopWatch** Class from the containment browser to the created label on the diagram.

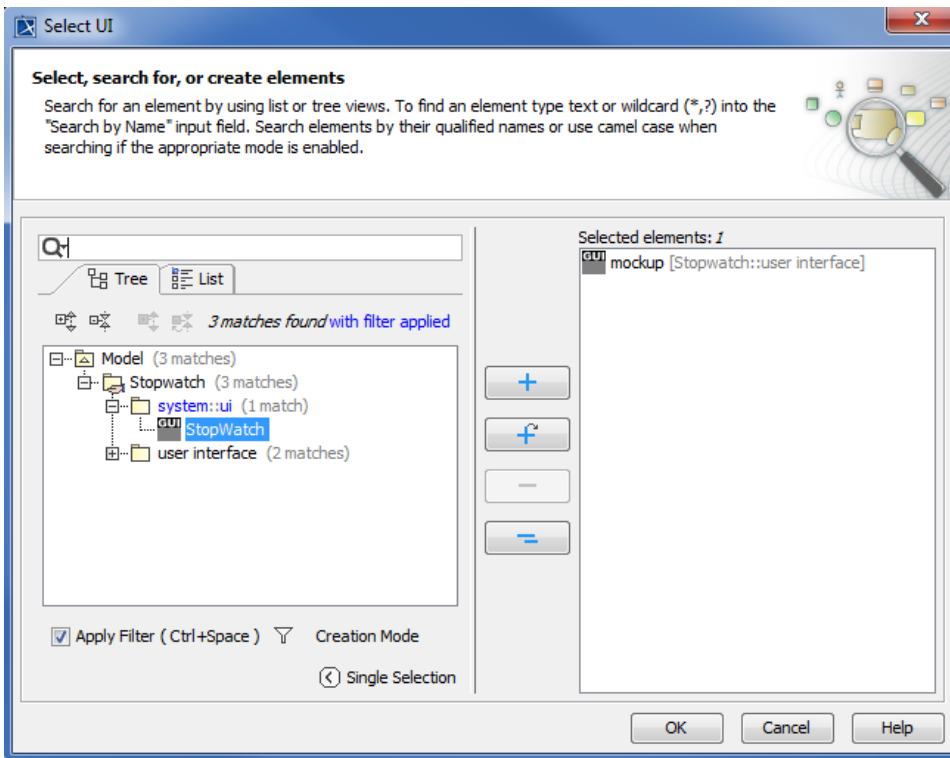


12. Create a Signal Instance Prototype by dragging the Signal from the containment browser to each of the buttons. The buttons will send the dragged signals to the runtime object when you click them during the execution. Therefore, each signal in the stopwatch model will be dragged to each button that has a corresponding name. For example, the start signal will be dragged to the **start** button, and the stop signal will be dragged to the **stop** button.



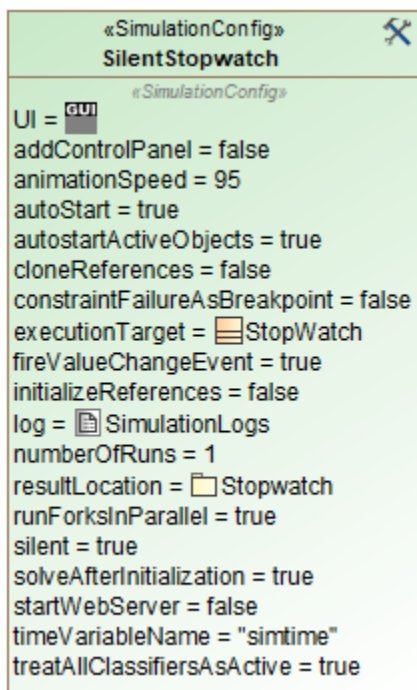
13. Open the Specification window of the **SilentStopwatch** Simulation Configuration to add the ready user interface mockup for the stopwatch to the SimulationConfig for the StopWatch.
14. Edit the **UI** field by clicking the  button. The **Select«UI»** dialog will open.

15. Select the created **Frame** in the **ui** package and click **OK**.



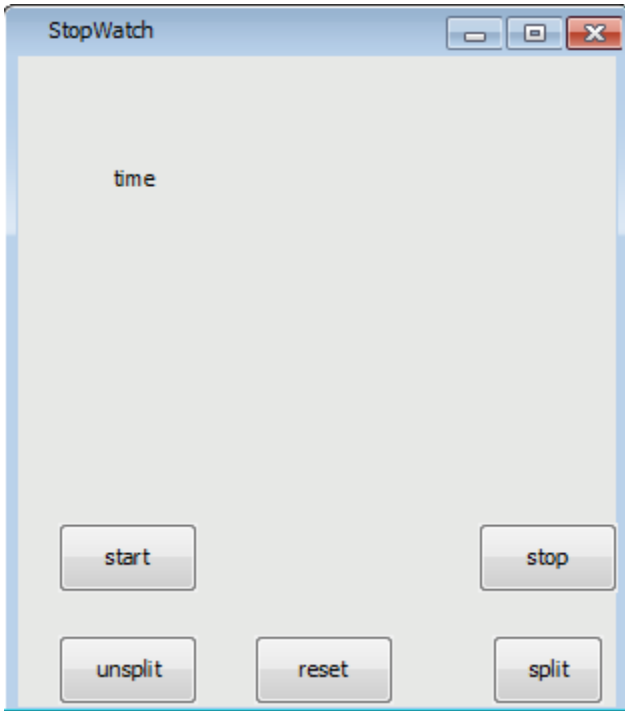
The modified SilentStopwatch is now ready to run the stopwatch with the UI mockup. Next, you need to run the SilentStopwatch Simulation Configuration.

To run the SilentStopwatch Simulation Configuration

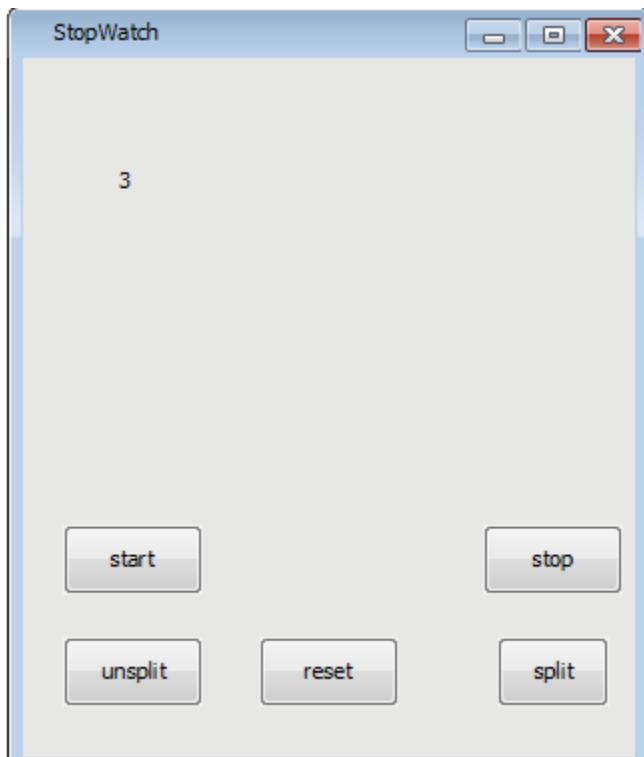


1. Right-click the SilentStopwatch Simulation Configuration and select **Simulation > Run**. A simulation session will be created to execute the Stopwatch class.

- Click the **RunSimulation** button on the **Simulation** window toolbar. The execution of the **StopWatch** class will start with the designed UI mockup. The time value displayed in the label is now zero (0).



You can click the **start** button to start the stopwatch. You can use the buttons on the UI mockup to send the signals to the runtime object of the **Stop Watch** class. The time value displayed on the label of the UI mockup will increment by one every second.



Click the **stop** button to stop the execution and click it again to go to the final stage, which is the termination of the execution.