

Lab – Java – JavaFX Video

Overview

Write a JavaFX application that plays a video.

Create an FXML GUI Application

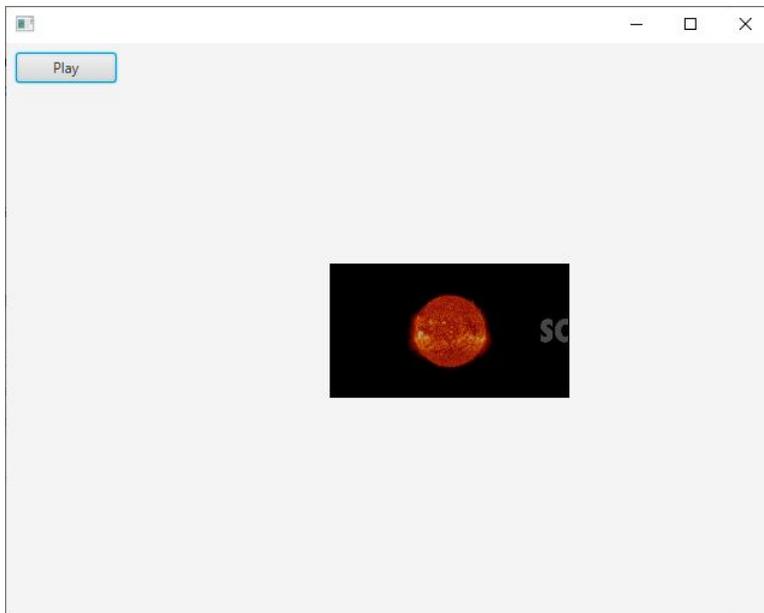
Create a new Java FXML GUI application. Make sure to copy the MP4 file you intend to play into the correct project directory.

Add Dependency and Update module-info.java

- Add the Maven dependency for playing videos using JavaFX.
- Update the module-info.java file as necessary.

Create the Window

Create the following window:



Here are the details of the layout:

- Use a BorderPane for the window.
- Put a VBox in the left region of the BorderPane.
- Set the VBox padding to 8 for left, right, top, and left.

- Set the VBox spacing to 10.
- Add the play button to the VBox.
- Set the max width of the play button to MAX_VALUE.
- Put a MediaView in the center region of the BorderPane.

Note: The MediaView will not show anything until you add the code to initialize it (see below).

Add Code to Play the Video

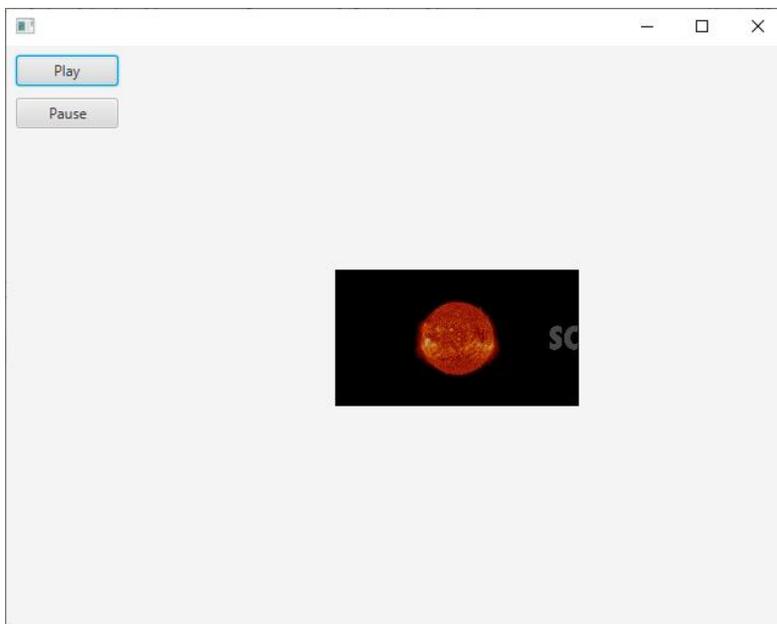
Add the necessary code to play the video:

- Add code to initialize the MediaView in the controller class (the controller must have an initialize method).
- Add an event handler for the Play button. The Play button should actually play the video.

Test the application. The video should now play when you press the play button.

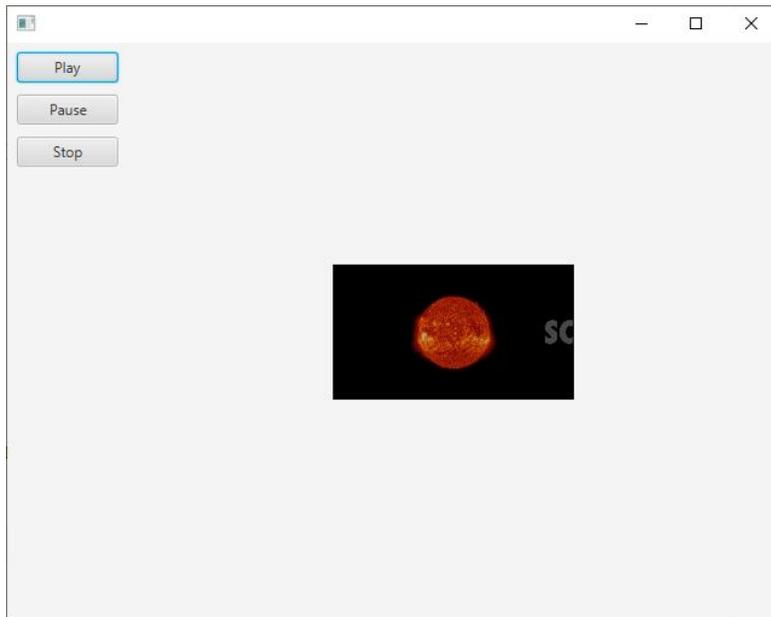
Add a Pause Button

Add a pause button to the application. It should have an event handler that causes the video to pause. Here is a screenshot:



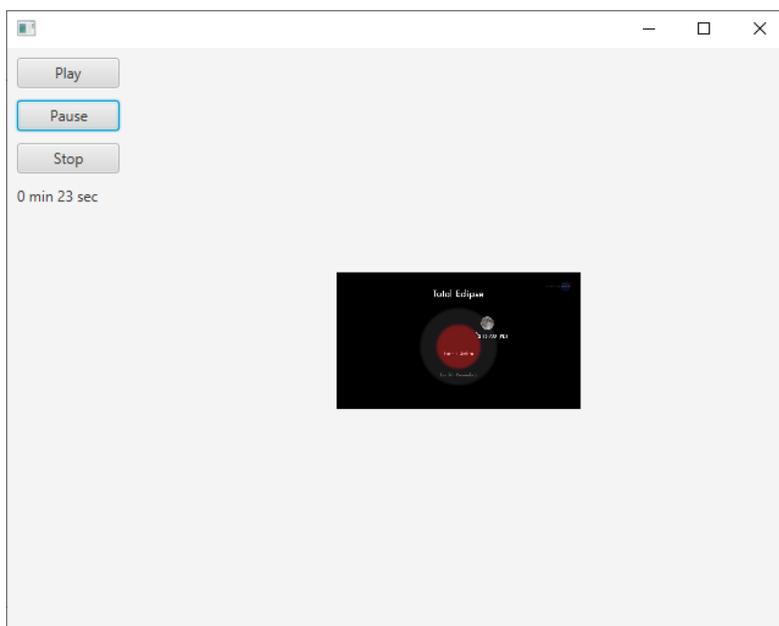
Add a Stop Button

Add a stop button to the application. It should have an event handler that causes the video to stop playing and go back to the beginning of the video. Here is a screenshot:



Show Current Time of Video

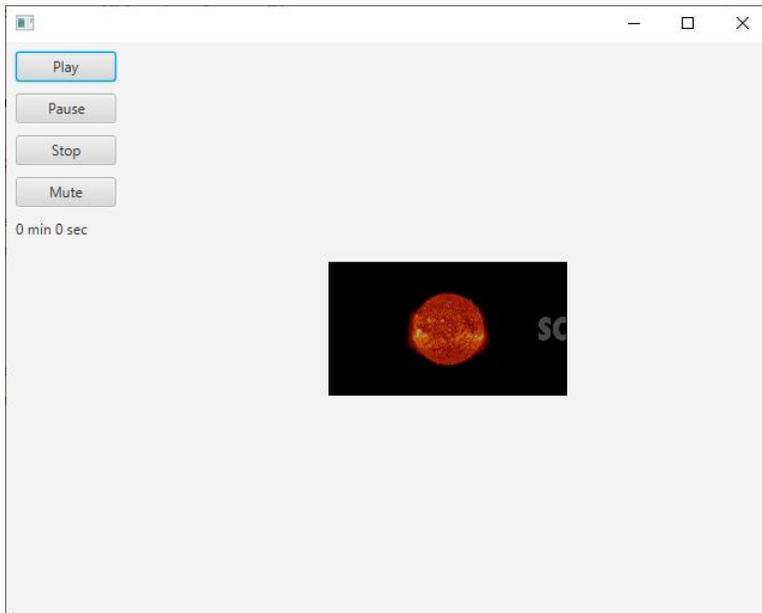
Show the current time of the video. The time should be updated automatically as the video is playing. Add a label to the VBox to hold the time. Also, make sure that the time gets set to 0 min 0 sec when pressing the stop button. Here is a screenshot:



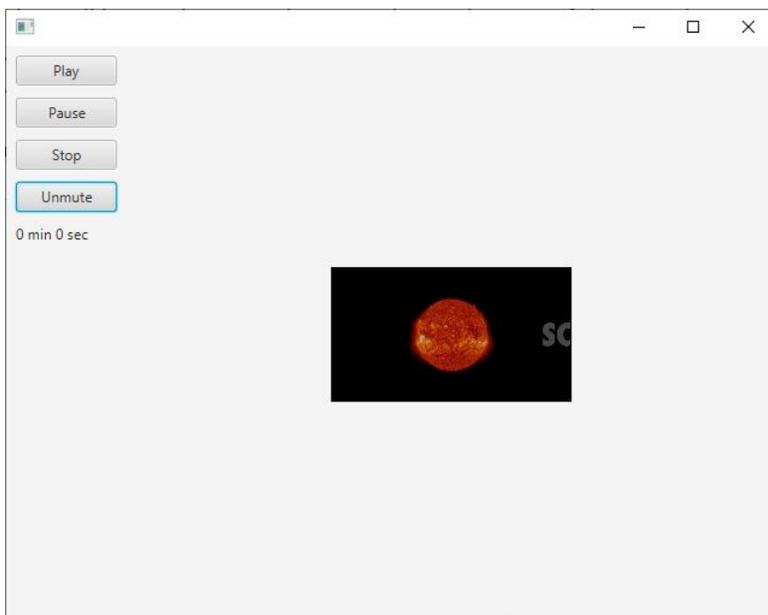
Mute/Unmute Button

Add a button that will be used to mute/unmute the application. If the sound is currently on it should be turned off. If the sound is off then it should be turned on. You should update the text on the button accordingly.

Here is a screenshot of the sound being on (button shows “Mute”):

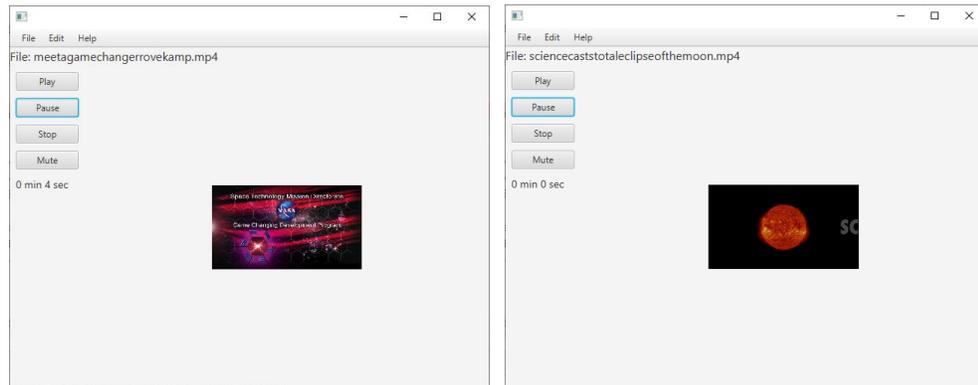


Here is a screenshot of the sound being off (button shows “Unmute”):



Other Possible Features to Try

- Allow the user to select the video to play.
 - Add a menu with a File|Open option.
 - Show a FileChooser when the user selects File|Open.
 - Display the name of the video file that is playing in the GUI.
 - Any video the user chooses to play should be located in the project's resource directory (same directory as the original video we played).
 - Here are screenshots:



- Add status information such as Playing, Ready, and Paused.
- Display the total video time.
- Add an event handler for when the video ends. It can show a message that the video has ended.