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## 2.2 EVENT HANDLING

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JavaFX in 4 Days

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# WHAT IS EVENT

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- There are two types of Events in JavaFX
  - One is user action event, such as mouse event, key events etc.
  - The other is it's own value change event
  - When event is happened, the registered event handler can be done automatically
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# HOW TO HANDLE EVENTS

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- Every public void method of controller class can be set as `onAction` attribute of FXML Nodes
  - `ButtonBase` and its sub class has `setOnAction` method and you can set `EventHandler` object as its parameter
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# ACTION METHOD

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@FXML

private Text message;

@FXML

private TextField textInput;

@Override

```
public void start(Stage primaryStage) throws Exception {  
    Parent root = FXMLLoader.load(getClass().getResource(FXML_FILE));  
    Scene scene = new Scene(root);  
    primaryStage.setScene(scene);  
    primaryStage.show();  
}
```

```
public void showMessage() {  
    message.setText(textInput.getText());  
}
```

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# USING ACTION METHOD

The image illustrates the concept of an Action Event and provides a list of associated event handlers.

**Action Event**

The diagram shows a sequence of events: a text input field, followed by an **ACTION METHOD** (highlighted with a yellow border), and then an **EVENT HANDLER** (also highlighted with a yellow border).

**Event Handlers:**

- On Action: # showMessage
- DragDrop
  - On Drag Detected: #
  - On Drag Done: #
  - On Drag Dropped: #
  - On Drag Entered: #
  - On Drag Exited: #
  - On Drag Over: #
  - On Mouse Drag Entered: #
  - On Mouse Drag Exited: #
  - On Mouse Drag Over: #



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# EVENT HANDLER

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@FXML

private Button btn;

@Override

public void initialize(URL location, ResourceBundle resources) {

btn.setOnAction(new EventHandler<ActionEvent>() {

@Override

public void handle(ActionEvent event) {

showMessage();

}

});

}

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# VALUE CHANGE EVENT

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```
@FXML
private ChoiceBox<Browser> choice;
@FXML
private ImageView img;
@FXML
private Text text;

@Override
public void initialize(URL location, ResourceBundle resources) {
    choice.getItems().addAll(browsers());

    choice.valueProperty().addListener((a, b, c) -> {
        Image image = new Image(getClass()
            .getResourceAsStream(c.getImgPath()));
        img.setImage(image);
    });

    img.setOnMouseClicked(a ->
        text.setText(choice.getSelectionModel()
            .getSelectedItem().getName()));
}
```

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# VALUE CHANGED

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