# Gestione di base degli eventi

#### **Basic Events**

```
MOUSE ENTERED TARGET
public class Event0 extends Application {
                                                  4 Ricevuto un evento di tipo MOUSE MOVED
      public void start(Stage stage) {
                                                  12 Ricevuto un evento di tipo MOUSE MOVED
         Button btn = new Button();
                                                  13 Ricevuto un evento di tipo MOUSE PRESSED
         btn.setText("Click me");
                                                  14 Ricevuto un evento di tipo ACTION
                                                  15 Ricevuto un evento di tipo MOUSE RELEASED
         Listener a=new Listener();
                                                  16 Ricevuto un evento di tipo MOUSE CLICKED
         btn.addEventHandler(Event.ANY, a);
                                                  17 Ricevuto un evento di tipo MOUSE MOVED
         Group root = new Group(btn);
         Scene scene = new Scene(root, 300, 250);
         stage.setScene(scene);
         stage.sizeToScene();
         stage.show();
                                                              000
    public static void main(String[] args){
                                                              Click me
        Application.launch(args); }
class Listener implements EventHandler{
    int counter=0;
    public void handle(Event t) {
     System.out.println(++counter+" Ricevuto un evento di tipo "
         +t.getEventType()); } }
```

1 Ricevuto un evento di tipo

3 Ricevuto un evento di tipo

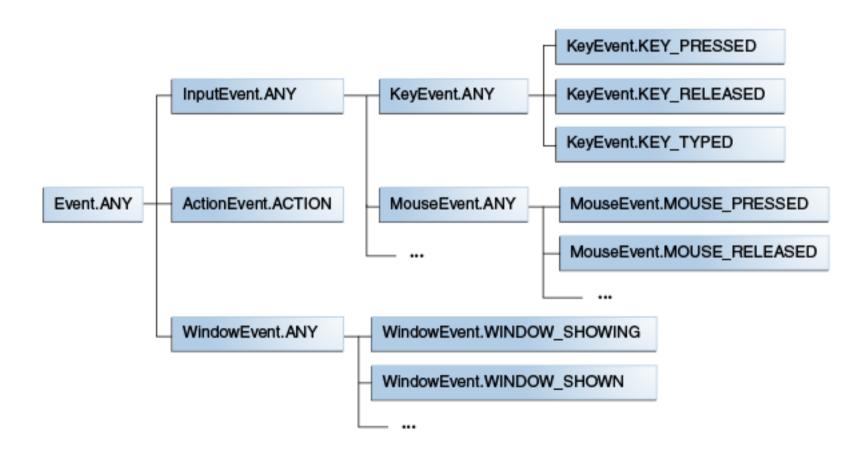
INPUT METHOD TEXT CHANGED

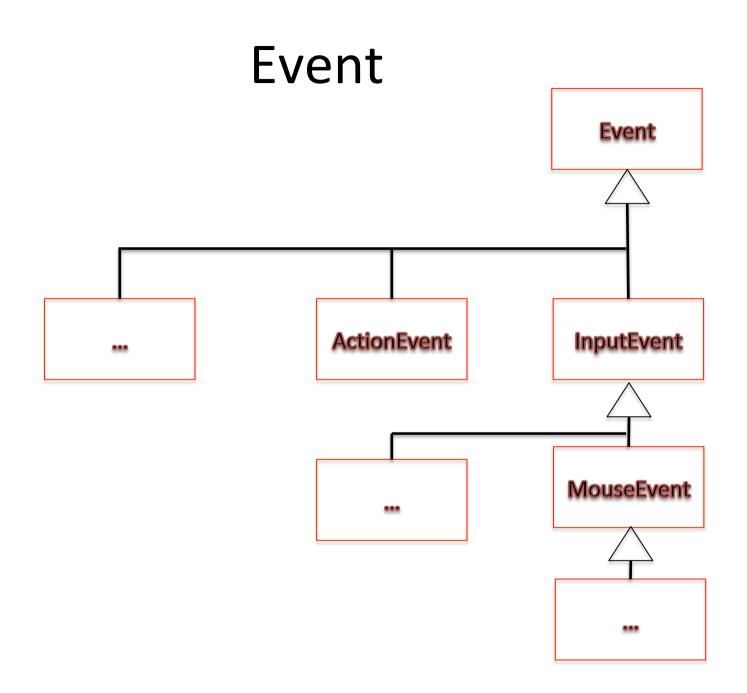
2 Ricevuto un evento di tipo MOUSE ENTERED

#### **Basic Events**

```
public class Event0 extends Application {
      public void start(Stage stage) {
        Button btn = new Button();
        btn.setText("Click me");
        Listener a=new Listener();
        btn.addEventHandler(ActionEvent.ACTION, a);
        Group root = new Group(btn);
        Scene scene = new Scene(root, 300, 250);
        stage.setScene(scene);
        stage.sizeToScene();
        stage.show();
                                                       000
    public static void main(String[] args){
                                                       Click me
       Application.launch(args); }
class Listener implements EventHandler{
    int counter=0;
    public void handle(Event t) {
     System.out.println(++counter+" Ricevuto un evento di tipo "
        +t.getEventType()); } }
```

## **Event hierarchy**





#### MultiListener

```
System.out.println(t); }
public class Event0 extends Application
       public void start(Stage stage) {
                                                    class EListener
         Button btn = new Button();
                                                          implements EventHandler{
         btn.setText("Click me");
                                                      public void handle(Event t) {
                                                           System.err.println(t); }
         Olistener o=new OListener();
         Elistener e=new EListener();
         btn.addEventHandler(ActionEvent.ACTION, o);
         btn.addEventHandler(ActionEvent.ACTION, e);
         Group root = new Group(btn);
         Scene scene = new Scene(root, 300, 250);
          stage (scene);
                                                                     000
          stage ();
                                                                     Click me
     public static void main(String[] args){
       Application.launch(args);
                                      Output 🛇

■ JavaFXApplication (run-single) #2 

                                                                              JavaFXApplication (ru
                                           compile-single:
                                           run-single:
                                           javafx.event.ActionEvent[source=Button[id=null, styleClass=button]]
                                           iavafx.event.ActionEvent[source=Button[id=null. styleClass=button]]
                                           javafx.event.ActionEvent[source=Button[id=null, styleClass=button]]
                                           javafx.event.ActionEvent[source=Button[id=null, styleClass=button]]
```

class OListener

implements EventHandler{

public void handle(Event t) {

#### Listener Esterno

```
Click me
public class AppWithEvents1 extends Application {
    Text text=null:
                                                             Non hai mai cliccato
    public void start(Stage stage) {
      text=new Text(10,50, "Non hai mai cliccato");
                                                             000
      Button btn = new Button();
                                                             Click me
      btn.setText("Click me");
                                                             Hai cliccato 5 volte
      Listener a=new Listener(this);
      btn.addEventHandler(ActionEvent.ACTION, a);
      Group root = new Group(btn);
                                          class Listener
                                               implements EventHandler{
      root.getChildren().add(text);
                                            AppWithEvents1 awe=null;
      Scene scene = new Scene(root);
                                            int counter=0;
      stage.setScene(scene);
                                            Listener(AppWithEvents1 a){
      stage.show();
                                                 awe=a;
                                            public void handle(Event t) {
    public void updateText(int n){
                                                awe.updateText(++counter);
      text.setText("Hai cliccato "+n
         +" volte");
    public static void main(String[] args) {
      Application.launch(args);
    }}
```

#### Listener Interno

```
Click me
public class AppWithEvents1 extends Application {
    Text text=null:
                                                             Non hai mai cliccato
    public void start(Stage stage) {
      text=new Text(10,50, "Non hai mai cliccato");
                                                            000
      Button btn = new Button();
                                                             Click me
      btn.setText("Click me");
                                                             Hai cliccato 5 volte
      Listener a=new Listener(this);
      btn.addEventHandler(ActionEvent.ACTION, a);
      Group root = new Group(btn);
                                          class Listener
                                               implements EventHandler{
      root.getChildren().add(text);
                                            AppWithEvents1 awe=null;
      Scene scene = new Scene(root);
                                            int counter=0;
      stage.setScene(scene);
                                            Listener(AppWithEvents1 a) {
      stage.show();
                                               <del>awe=a:</del>
                                            public void handle(Event t) {
    public void updateText(int n){
                                                awe.updateText(++counter);
      text.setText("Hai cliccato "+n
         +" volte");
    public static void main(String[] args) {
      Application.launch(args);
    }}
```

#### Listener Interno

```
Click me
public class AppWithEvents1 extends Application {
    Text text=null;
                                                             Non hai mai cliccato
    public void start(Stage stage) {
      text=new Text(10,50, "Non hai mai cliccato ");
                                                             000
      Button btn = new Button();
                                                              Click me
      btn.setText("Click me");
                                                             Hai cliccato 5 volte
      Listener1 a=new Listener();
      btn.addEventHandler(ActionEvent.ACTION, a);
      Group root = new Group(btn);
      root.getChildren().add(text);
      Scene scene = new Scene(root);
      stage.setScene(scene);
      stage.show();
                                          public void updateText(int n){
                                                text.setText("Hai cliccato"
    class Listener
                                                   +n+" volte");
       implements EventHandler{
       int counter=0;
                                              public static void main(
       public void handle(Event t) {
                                                   String[] args) {
           updateText(++counter);
                                                Application.launch(args);
                                              }}
    }}
```

#### Listener Interno Anonimo

```
Click me
public class AppWithEvents1 extends Application {
    Text text=null;
                                                             Non hai mai cliccato
    public void start(Stage stage) {
      text=new Text(10,50, "Non hai mai cliccato ");
                                                             000
      Button btn = new Button();
                                                             Click me
      btn.setText("Click me");
                                                             Hai cliccato 5 volte
      EventHandler a=new EventHandler(){
       int counter=0;
       public void handle(Event t) {
           updateText(++counter);
      }};
      btn.addEventHandler(ActionEvent.ACTION, a);
      Group root = new Group(btn);
      root.getChildren().add(text);
                                          public void updateText(int n){
                                                text.setText("Hai cliccato"
      Scene scene = new Scene(root);
                                                   +n+" volte");
      stage.setScene(scene);
      stage.show();
                                              public static void main(
                                                   String[] args) {
                                                Application.launch(args);
                                              }}
```

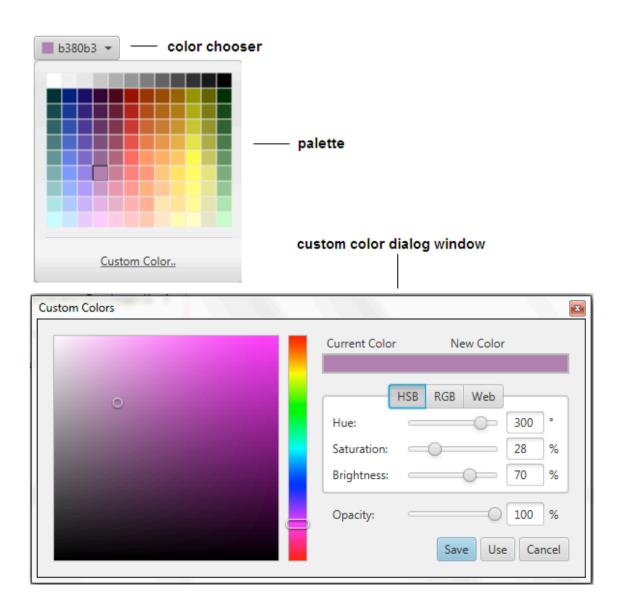
### Self Listener

```
Click me
public class AppWithEvents
    extends Application implements EventHandler {
                                                             Non hai mai cliccato
    Text text=null:
    int counter=0;
                                                             000
    public void start(Stage stage) {
                                                              Click me
      text=new Text(10,50, "Non hai mai cliccato ");
                                                             Hai cliccato 5 volte
      Button btn = new Button();
      btn.setText("Click me");
      btn.addEventHandler(ActionEvent.ACTION, this);
      Group root = new Group(btn);
      root.getChildren().add(text);
      Scene scene = new Scene(root);
      stage.setScene(scene);
      stage.show();
                                          public void updateText(int n){
                                                text.setText("Hai cliccato"
                                                   +n+" volte");
    public void handle(Event t) {
           updateText(++counter);
                                              public static void main(
                                                   String[] args) {
                                                Application.launch(args);
                                              }}
```

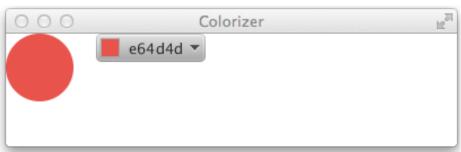
### Due questioni:

- ColorPicker
- Convenience Methods

### ColorPicker







```
public class Colorizer extends Application {
  public void start(final Stage stage) {
    final Circle circ = new Circle(40, 40, 30);
    final ColorPicker colorPicker1 = new ColorPicker(Color.BLACK);
    colorPicker1.addEventHandler(ActionEvent.ACTION, new EventHandler() {
             @Override
             public void handle(Event t) {
                  System.out.println(t.getEventType());
                  circ.setFill(colorPicker1.getValue());
    }});
    Scene scene = new Scene(new HBox(20), 400, 100);
    HBox box = (HBox) scene.getRoot();
    box.getChildren().addAll(circ,colorPicker1);
    stage.setScene(scene);
                                                 e64d4d ▼
    stage.show();
                                                                              Current Color
                                                                                      New Color
                                                                                    RGB Web
                                                                              Brightness:
                                           JavaFXApp
                                           sProjects,
                                                    Custom Color.
                                           .cation/sr
                                                                                   Save Use Cancel
```



000

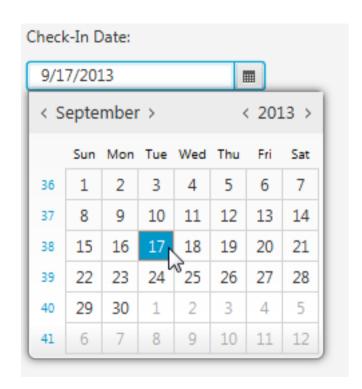
Colorizer

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#### Convenience Methods

```
public class Colorizer extends Application {
  public void start(final Stage stage) {
    final Circle circ = new Circle(40, 40, 30);
    final ColorPicker colorPicker1 = new ColorPicker(Color.BLACK);
    colorPicker1.setOnAction(new EventHandler(){
    // colorPicker1.addEventHandler(ActionEvent.ACTION, new EventHandler() {
             @Override
             public void handle(Event t) {
                  System.out.println(t.getEventType());
                 circ.setFill(colorPicker1.getValue());
    }});
    Scene scene = new Scene(new HBox(20), 400, 100);
    HBox box = (HBox) scene.getRoot();
    box.getChildren().addAll(circ,colorPicker1);
    stage.setScene(scene);
                                                 e64d4d ▼
    stage.show();
                                                                             Current Color
                                                                                     New Color
                                                                                    RGB Web
                                                                              Brightness:
                                           JavaFXApp
                                           sProjects,
                                                   Custom Color.
                                           .cation/sr
                                                                                   Save Use Cancel
```

#### DatePicker



http://docs.oracle.com/javase/8/javafx/user-interface-tutorial/date-picker.htm#CCHHJBEA