## mouse events purpose two listeners interfaces are provided

## 1.Java MouseListener Interface

The Java MouseListener is notified whenever you change the state of mouse. It is notified against MouseEvent. The MouseListener interface is found in java.awt.event package. It has five methods.

### Methods of MouseListener interface

The signature of 5 methods found in MouseListener interface are given below:

1. **public abstract void** mouseClicked(MouseEvent e);
2. **public abstract void** mouseEntered(MouseEvent e);
3. **public abstract void** mouseExited(MouseEvent e);
4. **public abstract void** mousePressed(MouseEvent e);
5. **public abstract void** mouseReleased(MouseEvent e);

## **2.** Java MouseMotionListener Interface

The Java MouseMotionListener is notified whenever you move or drag mouse. It is notified against MouseEvent. The MouseMotionListener interface is found in java.awt.event package. It has two methods.

### Methods of MouseMotionListener interface

The signature of 2 methods found in MouseMotionListener interface are given below:

1. **public abstract void** mouseDragged(MouseEvent e);
2. **public abstract void** mouseMoved(MouseEvent e);

Example:

```
import java.awt.*;

import java.awt.event.*;

public class MouseListenerExample extends Frame implements
MouseListener,MouseMotionListener{

    Label l;
```

```
MouseListenerExample(){
    addMouseListener(this);
    addMouseMotionListener(this);
        l=new Label();
    l.setBounds(20,50,100,20);
    add(l);
    setSize(300,300);
    setLayout(null);
    setVisible(true);
}
public void mouseClicked(MouseEvent e) {
    l.setText("Mouse Clicked");
}
public void mouseEntered(MouseEvent e) {
    l.setText("Mouse Entered");
}
public void mouseExited(MouseEvent e) {
    l.setText("Mouse Exited");
}
public void mousePressed(MouseEvent e) {
    l.setText("Mouse Pressed");
}
public void mouseReleased(MouseEvent e) {
    l.setText("Mouse Released");
```

```
    }
 public void mouseDragged(MouseEvent e) {
        l.setText("Mouse dragged");
    }
public void mouseMoved(MouseEvent e) {
        l.setText("Mouse moved");
    }
public static void main(String[] args) {
    new MouseListenerExample();
}          }
```

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# key events purpose java provides only one listener interface

## Java KeyListener Interface

The Java KeyListener is notified whenever you change the state of key. It is notified against KeyEvent. The KeyListener interface is found in java.awt.event package. It has three methods.

## Methods of KeyListener interface

The signature of 3 methods found in KeyListener interface are given below:

1. **public abstract void** keyPressed(KeyEvent e);
2. **public abstract void** keyReleased(KeyEvent e);
3. **public abstract void** keyTyped(KeyEvent e);

Example:

```
import java.awt.*;
```

```
import java.awt.event.*;
public class KeyListenerExample extends Frame implements KeyListener{
    Label l;
    TextArea area;
    KeyListenerExample(){

        l=new Label();
        l.setBounds(20,50,100,20);
        area=new TextArea();
        area.setBounds(20,80,300, 300);
        area.addKeyListener(this);

        add(l);add(area);
        setSize(400,400);
        setLayout(null);
        setVisible(true);
    }
    public void keyPressed(KeyEvent e) {
        l.setText("Key Pressed");
    }
    public void keyReleased(KeyEvent e) {
        l.setText("Key Released");
    }
    public void keyTyped(KeyEvent e) {
```

```
        l.setText("Key Typed");
    }
  public static void main(String[] args) {
        new KeyListenerExample();
    }          }
```

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