

Section 10: Exception Handling

1) Exception

- a) error during runtime
- b) exception handling - handling predictable runtime errors when they occur

c)

2) try-catch

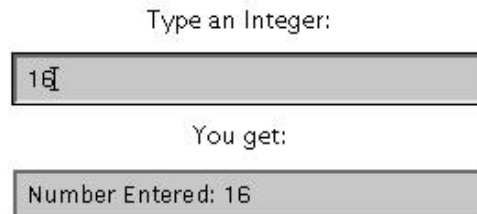
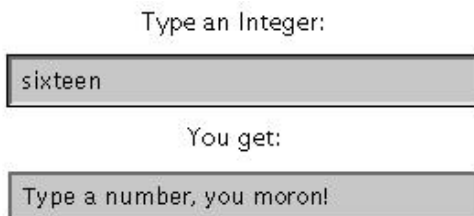
- a) means of handling runtime errors
- b) syntax:

```
try {  
    some-action  
}  
catch (exception parameter) {  
    statements  
}
```

3) try-catch example:

```
import java.awt.*;  
import java.applet.Applet;  
import java.awt.event.*;  
  
public class chp16 extends Applet implements ActionListener {  
  
    private TextField inField;  
    private TextField outField;  
    private Label inLabel, outLabel;  
  
    public void init() {  
        inLabel = new Label("Type an Integer:");  
        outLabel = new Label("You get:");  
        inField = new TextField(30);  
        outField = new TextField(30);  
        outField.setEditable(false);  
  
        add(inLabel);  
        add(inField);  
        inField.addActionListener(this);  
        add(outLabel);  
        add(outField);  
    }  
  
    public void paint(Graphics g) {  
        setBackground(Color.white);  
        g.setColor(Color.black);  
    }  
}
```

```
public void actionPerformed(ActionEvent event) {
    if (event.getSource() == inField) {
        try {
            int n = Integer.parseInt(inField.getText());
            outField.setText("Number Entered: " + n);
        }
        catch (NumberFormatException e) {
            outField.setText("Type a number, you moron!");
        }
    }
}
```



4) Notes:

- a) Any variable required in both the try and catch block must be declared outside of the try-catch.
- b) List of exceptions:

```
ArithmeticException
IndexOutOfBoundsException
    ArrayIndexOutOfBoundsException
IllegalArgumentException
    NumberFormatException
FileNotFoundException
MalformedURLException
InterruptedException
```