

## Model.scala

```
1 package com.tavor.project
2 import scala.xml._
3 import java.net._
4 import scala.util.control.Breaks._
5 import org.apache.log4j.Logger;
6 import org.apache.log4j.PropertyConfigurator;
7
8 class Model() extends ModelInterFace {
9
10  val url = new URL("http://www.boi.org.il/currency.xml") //returns URL object
11  val conn = url.openConnection //returns URLConnection object
12  val doc = XML.load(conn.getInputStream) //returns Elem object represent
    XML element
13
14  def getDate(): String = (doc \ "LAST_UPDATE").text //return date of last
    update
15
16  def getData(): Array[String] = {
17
18    var vec: Array[String] = new Array[String](28)
19    var i: Int = 0
20
21    for (elm <- (doc \ "CURRENCY")) { //parse the xml currencies, return data
    as an array
22      var rate: Double = 0
23      rate = (elm \ "RATE").text.toDouble
24      if ((elm \ "UNIT").text.toDouble == 10) {
25        rate = rate / 10
26      }
27      if ((elm \ "UNIT").text.toDouble == 100) {
28        rate = rate / 100
29      }
30      vec(i) = ((elm \ "COUNTRY").text)
31      i += 1
32      vec(i) = rate.toString()
33      i += 1
34    }
35    vec
36  }
37
38  def Convert(from: String, amount: Double, to: String): Double = {
39    var fromRate: Double = 1
40    var toRate: Double = 1
41    var shekel: Double = 1
42    var Result: Double = 0
43
44    breakable {
```

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```

45     for (elm <- (doc \\ "CURRENCY")) {
46         if (from == "ILS") { //if shekel then No-change
47             fromRate = 1
48             break
49         }
50         if (from == (elm \\ "CURRENCYCODE").text) { //if any "regular" coins
51             fromRate = ((elm \\ "RATE").text.toDouble)
52             break
53         }
54     }
55 }
56 if (from == "JPY") //JPY & LBP fix "to small" rates from 1 unit
57     fromRate = fromRate / 100
58 if (from == "LBP")
59     fromRate = fromRate / 10
60
61 breakable {
62     for (elm <- (doc \\ "CURRENCY")) {
63         if (to == (elm \\ "CURRENCYCODE").text) {
64             toRate = ((elm \\ "RATE").text.toDouble)
65             break;
66         }
67     }
68 }
69
70 if (from == "JPY")
71     fromRate = fromRate / 100 //JPY & LBP fix "to small" rates from 1 unit
72 if (from == "LBP")
73     fromRate = fromRate / 10
74
75 if (from != "ILS") { //calculate result
76     shekel = fromRate * amount
77     Result = shekel / toRate
78 }
79
80 if (from == "ILS") {
81     Result = amount / toRate
82 }
83 Result
84 }
85
86
87 }
88
89

```