# Decision Table and State Transition Testing

# Homework

**Decision Table Testing**

1. Below is a decision table for daily activities. Fill in the columns with true and false:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Conditions** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
| **Is today a weekday?** | Y | Y | Y | Y | N | N | N | N |
| **Is today a holiday?** | Y | Y | N | N | Y | Y | N | N |
| **Is it raining?** | Y | N | Y | N | Y | N | Y | N |
| **Actions** |  |  |  |  |  |  |  |  |
| **Go to work** | N | N | Y | Y | N | N | N | N |
| **Go on a picnic** | N | Y | N | N | N | Y | N | NS |
| **Stay home** | Y | N | N | N | Y | N | Y | N |

1. A store wishes to program a decision on non-cash receipts for goods into their intelligent tills.

The conditions to check are agreed as:

* Transaction under £50
* Pays by cheque with cheque card (guarantee £50)
* Pays by credit card

The possible actions that a cashier could take are agreed as:

* Ring up sale
* Call a supervisor
* Automatic check of credit card company database

Using the rules above construct a decision table showing all possible combinations of alternatives.

1. Automate a test case form the table below using Telerik Testing Framework.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Decision table - full (charting example)*** | | | | | | | | | | | | | | | | |
| **Conditions** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** |
| Horizontal axis | Lin | Lin | Lin | Lin | Log | Log | Log | Log | DT | DT | DT | DT | Cat | Cat | Cat | Cat |
| Vertical axis | Lin | Log | DT | Cat | Lin | Log | DT | Cat | Lin | Log | DT | Cat | Lin | Log | DT | Cat |
| **Actions** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bar series |  | X |  | X | X |  |  | X |  |  |  | X | X | X |  |  |
| Line series |  | X | X |  | X |  | X |  | X | X |  |  |  |  |  |  |
| Scatter series | X | X |  |  | X | X |  |  |  |  |  |  |  |  |  |  |

You should use the setup project **AcademyTestProject** (attached in Demo section).

Add a new test in the project and sent it to us.

Don’t forget that the first test case is automated and the test is in the project.

**State Transition Testing**

1. For the examples perform the following:

* Draw a state transition diagram
* Determine the level of coverage
* Make a state transition table from the diagram
* Define logical test cases

1. Two-speed electric toothbrush

* A two-speed electric toothbrush is operated by pressing its one button
* The ﬁrst press of the button turns the toothbrush from off to speed one, the second press of the button turns it to speed two
* When the button is pressed for a third time the electric toothbrush is turned off

1. Tape player

* A tape player has three operations: play, fast forward and fast play.
* Play and fast forward are activated using the play and fast forward button respectively. These operations can be cancelled using the stop button. When in play mode, the fast forward can be used to fast play. When in fast play mode, the fast forward button can be pressed again to enter fast forward or the stop button can be used to return to play. When in fast forward the play button can be pressed to enter play mode directly.

Make 0-switch and 1-switch coverage.

1. Simple electronic clock

* A simple electronic clock has four modes: display time, change time, display date and change date
* The change mode button switches between display time and display date
* The reset button switches from display time to adjust time or display date to adjust date
* The set button returns from adjust time to display time or adjust date to display date

Make 0-switch and 1-switch coverage.

1. Using that State Transition Diagram, complete the state transition table below.

Create logical test cases based on that diagram.



