

Chapter 1

LTL/NuSMV Code Sample

```
-- main module
MODULE main

VAR
  -- all pages
  current_page : {null, page1, index, page2};
  -- allowing NuSMV to select pages at random
  browse_to_page : {null, page1, index, page2};
  -- flags
  operation_running : boolean;
  operation_finished : boolean;
  navigation_running : boolean;
  navigation_finished : boolean;

ASSIGN
  init (operation_running) := 0;
  init (operation_finished) := 0;
  init (navigation_finished) := 1;
  -- we start off without being on any page
  init (current_page) := null;
  -- click_button is chosen by nusmv
  -- browse_to_page is chosen by nusmv

  next (operation_running) := case
    1 : 0;
  esac;

  next (operation_finished) := case
    1 : 0;
  esac;

-- checks for infinite loops

LTLSPEC
  G (operation_running = 1 -> F operation_finished = 1)
```

```
LTLSPEC
```

```
-- uses same format as loop.smv
```

```
G ((!(navigation_running = 1 -> !(F navigation_finished = 1))) U navigation_running = 0)
```

Bibliography

