Recipe 0.8. Creating a terminal progress bar

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1. Problem

You want to create a progression bar for terminal.

2. Definition

A progress bar typically communicates the progress of some work by displaying its percentage of completion and possibly a textual display of this percentage.

A progression bar has 2 modes of execution. Depending on the *a priori* knowledge of the total steps, we have a `Determinate` mode or an `Indeterminate` mode.

3. Solution

We've define an interface ProgressBar that more or less adapt to the javax.swing.JProgressBar. One of the implemented class JProgressBarAdapter is just an adapter of JProgressBar to the ProgressBar interface. The other that interest us is TerminalProgressBar.

Our terminal progression bar is constituted of 2 parts:

1. the current processed step (over all steps) found in the Left Margin (LM)
2. the Progression Bar (PB) itself

Here is an example in the determinate mode:

```
// a new determinate progress bar (10 steps maximum)
TerminalProgressBar progressBar =
        TerminalProgressBar.newInstance(0, 10);

// set the left space length
progressBar.setLeftMarginLength(3);

// set the progress bar length
progressBar.setBarLength(10);

for (int i = 0; i # 10; i++) {
        progressBar.setValue(i);
}

// display the following (note that only one
// animating line will appear in your terminal)
//   0/10 [          ]
//   1/10 [=         ]
//   2/10 [==        ]
//   3/10 [===       ]
//   4/10 [====      ]
```

```
//  5/10 [=====      ]
//  6/10 [======     ]
//  7/10 [=======    ]
//  8/10 [========   ]
//  9/10 [========= ]
// 10/10 [==========]
```

and an example in the indeterminate mode:

```
// change the mode
progressBar.setIndeterminate(true);

// set the period of refreshing the progress bar (2nd part)
progressBar.setRefreshBarPeriod(1);


for (int i = 0; i # 10; i++) {
        progressBar.setValue(i);
}

// notify the progress bar it is the last task
progressBar.completed();
progressBar.setValue(10);

// display the following (note that only one
// animating line will appear in your terminal)
//  0 [=====      ]
//  1 [ =====     ]
//  2 [  =====    ]
//  3 [   =====   ]
//  4 [    ===== ]
//  5 [     =====]
//  6 [    ===== ]
//  7 [   =====   ]
//  8 [  =====    ]
//  9 [ =====     ]
// 10 [==========]
```

4. Discussion

5. See Also

See also their inclusion in [MS reader](#)s.