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Command line progress bar in Java [closed]



I have a Java program running in command line mode. I would like to display a progress bar, showing the percentage of job done. The same kind of progress bar you would see using wget under unix. Is this possible?

[java](#) [command-line](#) [progress-bar](#)

edited Jun 13 '15 at 17:20

 [dimo414](#)
20k 7 73 118

asked May 12 '09 at 13:03

 [g andrieu](#)
623 2 7 10

closed as off-topic by [gnat](#), [Jason Sturges](#), [kevchadders](#), [EdChum](#), [S.L. Barth](#) Apr 23 '14 at 8:26

This question appears to be off-topic. The users who voted to close gave this specific reason:

- "Questions asking us to **recommend or find a tool, library or favorite off-site resource** are off-topic for Stack Overflow as they tend to attract opinionated answers and spam. Instead, [describe the problem](#) and what has been done so far to solve it." – [gnat](#), [Jason Sturges](#), [kevchadders](#), [EdChum](#), [S.L. Barth](#)

If this question can be reworded to fit the rules in the [help center](#), please [edit the question](#).

I don't know the answer to your specific question, but you could start by checking the libraries mentioned in this question: stackoverflow.com/questions/435740/... – [Jonik](#) May 12 '09 at 13:16

Thanks. The libraries cited there are more about command-line argument parsing, rather than display into the console. But thanks anyways. – [g andrieu](#) May 12 '09 at 15:02

4 This is on topic. OP asks if possible, not for a library recommendation (at least in current edit)
– [Neil McGuigan](#) Mar 18 at 22:26

6 Answers

I have implemented this sort of thing before. Its not so much about java, but what characters to send to the console.

The key is the difference between `\n` and `\r`. `\n` goes to the start of a new line. But `\r` is just *carriage return* - it goes back to the start of the same line.

So the thing to do is to print your progress bar, for example, by printing the string

```
"|=====| \r"
```

On the next tick of the progress bar, overwrite the same line with a longer bar. (because we are using `\r`, we stay on the same line) For example:

```
"|=====| \r"
```

What you have to remember to do, is when done, if you then just print

```
"done!\n"
```

You may still have some garbage from the progress bar on the line. So after you are done with the progress bar, be sure to print enough whitespace to remove it from the line. Such as:

```
"done"           |\n"
```

Hope that helps.

edited Nov 17 '11 at 10:48



KARASZI István

19.8k 5 52 98

answered May 12 '09 at 13:30



Matthias Wandel

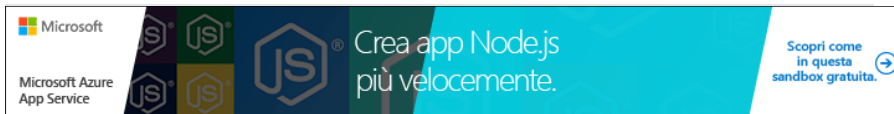
3,832 6 23 30

Sure helps. Thanks a lot. – [g andrieu](#) May 12 '09 at 15:00

Is this really cross-platform ? It will probably behave ok on Windows and Linux, but what about Macs ? I don't have one, so I can't try it... – [Radu Murzea](#) Jun 8 '13 at 15:04

@RaduMurzea OS X is an *NIX OS, so if it works on Linux, it'll work on OS X (that's not true for everything, but that's true here). – [bfontaine](#) Jun 27 '13 at 19:06

2 Thanks! However this does not work with ant (tried on both linux and osx; works fine when invoking java directly). Anyone any idea? – [user495285](#) Feb 12 '14 at 20:12



I found the following code to work correctly. It writes bytes to the output buffer. Perhaps that methods using a writer like the `System.out.println()` method replaces the occurrences of `\r` to `\n` to match the target's native line ending(if not configured properly).

```
public class Main{
    public static void main(String[] argv) throws Exception{
        String anim= "|/-\\";
        for (int x =0 ; x < 100 ; x++){
            String data = "\r" + anim.charAt(x % anim.length()) + " " + x
;
            System.out.write(data.getBytes());
            Thread.sleep(100);
        }
    }
}
```

answered Nov 23 '09 at 21:32



keesj

121 1 2

C# Example but I'm assuming this is the same for `System.out.print` in Java. Feel free to correct me if I'm wrong.

Basically, you want to write out the `\r` escape character to the start of your message which will cause the cursor to return to the start of the line (Line Feed) without moving to the next line.

```
static string DisplayBar(int i)
{
    StringBuilder sb = new StringBuilder();

    int x = i / 2;
    sb.Append("|");
    for (int k = 0; k < 50; k++)
        sb.AppendFormat("{0}", ((x <= k) ? " " : "="));
    sb.Append("|");

    return sb.ToString();
}

static void Main(string[] args)
{
    for (int i = 0; i <= 100; i++)
    {
        System.Threading.Thread.Sleep(200);
        Console.Write("\r{0} {1}% Done", DisplayBar(i), i);
    }

    Console.ReadLine();
}
```

answered May 12 '09 at 13:17

[Eoin Campbell](#)

28.5k 11 71 126

Nice example, will sure be helpful. Thanks. – [g andrieu](#) May 12 '09 at 15:01

Beautiful! Thank you. Works like a charmer. Easy to read. Lovely – [kholofelo Maloma](#) Jul 7 at 9:55

This would be possible with a Java Curses library. [This](#) is what I have found. I haven't used it myself and I don't know if it is cross-platform.

answered May 12 '09 at 13:17

[kgiannakakis](#)

75.6k 15 123 166

Curses may be a bit of overhead for the easy usage I need, but that sure is a track. Thanks. – [g andrieu](#) May 12 '09 at 15:03

I use a "bouncing" progress bar when I need to delay a tool to prevent a race condition.

```

private void delay(long milliseconds) {
    String bar = "[-----]";
    String icon = "%";

    long startTime = new Date().getTime();
    boolean bouncePositive = true;
    int barPosition = 0;

    while((new Date().getTime() - startTime) < milliseconds) {
        if(barPosition < bar.length() && barPosition > 0) {
            String b1 = bar.substring(0, barPosition);
            String b2 = bar.substring(barPosition);
            System.out.print("\r Delaying: " + b1 + icon + b2);
            if(bouncePositive) barPosition++;
            else barPosition--;
        } if(barPosition == bar.length()) {
            barPosition--;
            bouncePositive = false;
        } if(barPosition == 0) {
            barPosition++;
            bouncePositive = true;
        }

        try { Thread.sleep(100); }
        catch (Exception e) {}
    }
    System.out.print("\n");
}

```

answered May 23 '13 at 18:15

[mkeathley](#)

70 6

Here is a modified version of the above:

```

private static boolean loading = true;
private static synchronized void loading(String msg) throws IOException,
InterruptedException {
    System.out.println(msg);
    Thread th = new Thread() {
        @Override
        public void run() {
            try {
                System.out.write("\r".getBytes());
                while(loading) {
                    System.out.write("-".getBytes());
                    Thread.sleep(500);
                }
                System.out.write("| Done \r\n".getBytes());
            } catch (IOException e) {
                e.printStackTrace();
            } catch (InterruptedException e) {
                e.printStackTrace();
            }
        }
    };
}

```

```
};
    th.start();
}
```

... and in main:


```
loading("Calculating ...");
```

edited May 11 '15 at 11:43

 [Aleksandr M](#)

19.2k 11 35 53

answered Apr 23 '14 at 6:33

 [user3563245](#)

11 1