

Technical Task - Cron Expression Parser

Write a command line application or script that parses a cron string and expands each field to show the times at which it will run. You may use whichever language you feel most comfortable with. The assignment must have an automated test suite.

Please do not use any existing cron parser libraries for this exercise. While using pre-built libraries is generally a good idea, we want to assess your ability to create your own!

You should only consider the standard cron format with five time fields (minute, hour, day of month, month, and day of week) plus a command, and you do not need to handle the special time strings such as "@yearly". The input will be on a single line.

The cron string will be passed to your application as a single argument.

```
~$ your-program " d "
```

The output should be formatted as a table with the field name taking the first 14 columns and the times as a space-separated list following it.

For example, the following input argument:

```
*/15 0 1,15 * 1-5 /usr/bin/find
```

Should yield the following output:

minute	0 15 30 45
hour	0
day of month	1 15
month	1 2 3 4 5 6 7 8 9 10 11 12
day of week	1 2 3 4 5
command	/usr/bin/find

You should spend no more than three hours on this exercise. If you do not have time to handle all possible cron strings, an application that handles a subset of them correctly is better than one that does not run or produces incorrect results. In the interview, you will be asked to extend the solution with additional features and tests, so please have your development environment ready in the way you like it and ready for screen sharing.

You should consider your project reviewer a new team member to whom you are handing the project over. Provide everything you feel would be relevant for them to ramp up quickly,

such as documentation or a README with instructions for running your project and its tests in a clean Mac OS X/Linux environment.

Please do not use any existing cron parser libraries for this exercise. While using pre-built libraries is generally a good idea, we want to assess your ability to create your own.

We are interested in learning how you work and solve problems therefore we expect this submission to be fully done by yourself. In this instance we say no to AI - all AI-generated submissions will be rejected.