

Using Racket and DrRacket in COMP 360

Overview

For the first portion of the course, we will be using the Racket language (a variant of Scheme) and the DrRacket programming system. This document describes basic installation and usage steps sufficient for doing your homework.

The main website for Racket-related things is <http://racket-lang.org>. See in particular The Racket Guide at <http://docs.racket-lang.org/guide/index.html>.

Installation

All you need is the DrRacket system. You can download DrRacket for your own machine from <http://racket-lang.org/download> and follow the installation instructions.

First Time Set-Up

The first time you use DrRacket, check the lower left corner of the window to see if it says “determine language from source.” If it doesn’t say that, click on whatever it does say and change it to “determine language from source.” DrRacket should remember this choice in the future.

Structure of your Racket files

- Create and save programs in the (top) “Definitions Window.” You can save your file wherever. Use a `.rkt` file extension.
- Make the first line of your file exactly (including the `#` character):

```
#lang racket
```

This tells DrRacket that your file is in the Racket language and not some other language. You can have lines of comments before this line.

Using DrRacket

For the most part DrRacket is an easy-to-use system with lots of documentation. Here are a few specific notes related to how we will use it:

- Click “Run” to have the REPL process the definitions in your file.
- Clicking “Run” will “start the REPL over” — all previous work will disappear and only the definitions from the file you “Run” will be defined.
- If you want to save work in the REPL, do so before clicking “Run.” There is also an option under “File” for “Log Definitions and Interactions” that you can use to save not only your definitions, but what you type in the lower half of the window as well.

- A useful shortcut in the REPL is to use Alt-P (any number of times) to bring back up recent interactions. Moreover, this works even to bring up interactions from before the most recent “Run.” That is, even though the interactions disappeared and are not part of the current environment, you can still use Alt-P to bring them back and then edit them or click Return to re-run them.
- When using a second testing file as described in the previous section, click “Run” in the window that has the testing file. This will send to the REPL your homework solution *and* your tests.
- If you cause an infinite loop, click “Stop.”
- You can (re-)indent a line with the TAB key. You can select multiple lines and hit TAB to reindent all selected lines.