

Homework Assignment 8

Any automatically graded answer may be manually graded by the instructor. Submissions are expected to only use functions taught in the course. If a submission uses a disallowed function, that exercise can get zero points. Excluding promises, *all functions that mutate values are disallowed* (mutable functions usually have a ! in their name).

The interpreter

1. Implement the following **effectful** functions:
 - (a) (`env-put e x v`): given a heap `m` return as a new state (`environment-put m e x v`) and as a result (`d:void`).
 - (b) (`env-push e x v`): given a heap `m` return (`environment-push m e x v`)
 - (c) (`env-get e x`): given a heap `m` return the same state and as a result (`environment-get m e x`).
- Feel free to use the solution of Homework 6 as the basis of your implementation.
2. Rewrite `eval-exp` and `eval-term` to be monadic. **Neither function can manipulate the memory directly.** Your solution **must** use the do-notation when composing multiple effectful operations instead of `eff-bind`.