

```
1 #lang racket
2
3 (define (our-if c1 t f)
4   (printf "Begin function\n")
5   (if c1
6       t
7       f))
8
9 ; Does it work?
10
11 (our-if (= 4 4) 5 6)
12
13 (our-if (= 4 4) (printf "true!\n") (printf
13 "false!\n"))
14
15 (our-if (= 4 4) (+ 1 2) (+ 3 4))
16
17 (if (= 4 4) (printf "true!\n") (printf
17 "false!\n"))
18
19 ;; How do we hold off on evaluating
19 arguments to functions?
20 ;; With functions!
21
22 (our-if (= 4 4)(lambda ()(printf
22 "true!\n"))(lambda ()(printf "false!\n")))
23
24 (define (our-if2 c1 t f)
25   (if c1
26       (t)
27       (f)))
28
29 (our-if2 (= 4 4)(lambda () (printf
```

```
29 "true!\n"))(lambda () (printf "false!\n"))))
30
31 ;; Why does this work?
32 ;; Functions do two things: abstract over
32 data and delay evaluation
33
34 (printf "Hello world!\n")
35
36 (lambda () (printf "Hello world!\n")) ;
36 Operation packed up, awaiting deployment
37
38 ( (lambda () (printf "Hello world!\n")) ) ;
38 Function application -> operation is
38 triggered
39
40
41 (define (foo x y z w v)
42   (printf "Hello world!"))
43
44 (foo (+ 1 2) (printf "y") (printf "z") (-
44 10 1) (printf "v"))
```