DDG University

Informal Goals

1. Learn new things related to technology.
2. Learn from each other.
3. Foster inter-team building.
4. To become better engineers.

Search for DDG University in Asana.

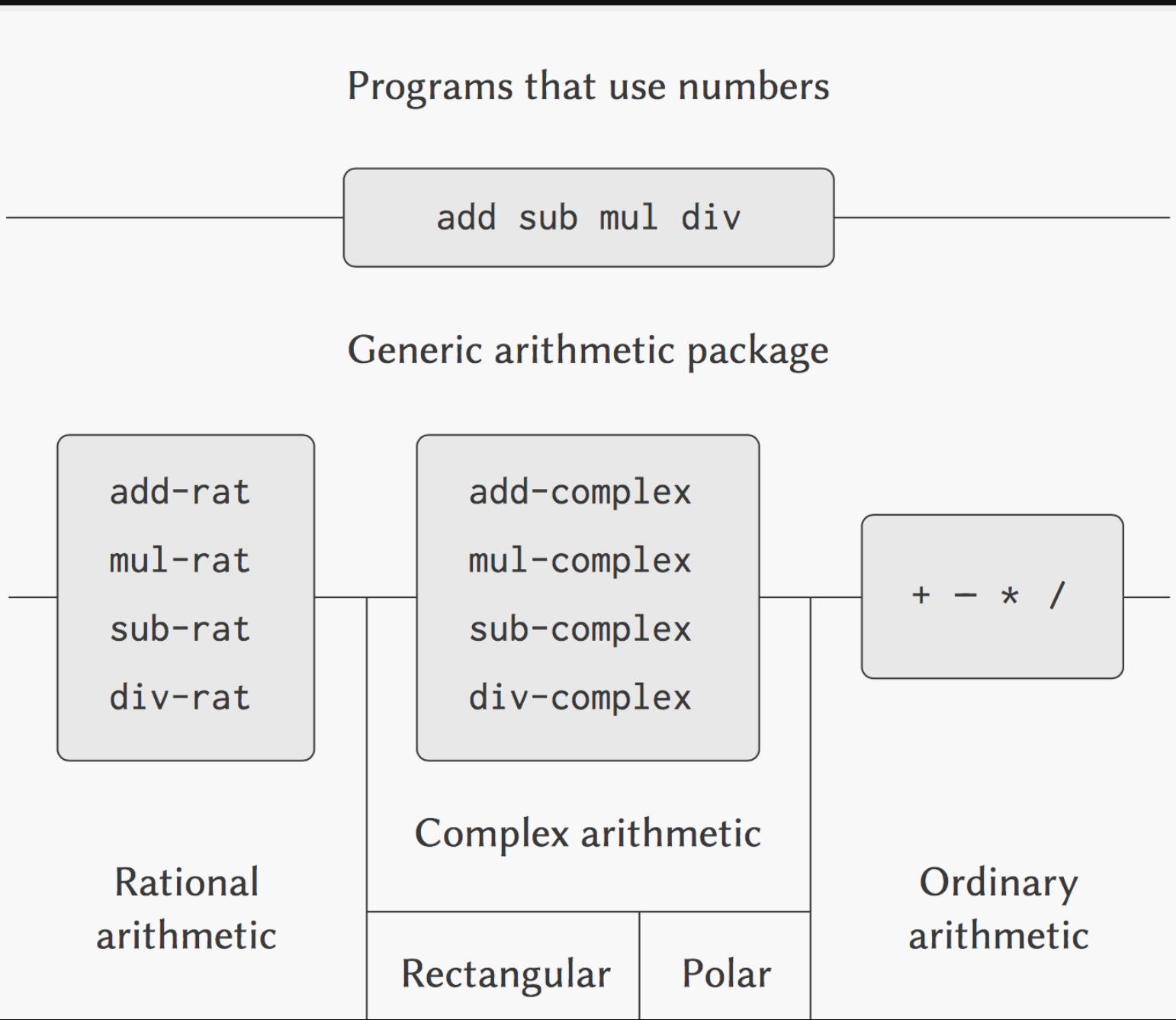
Structure and Interpretation of Computer Programs *(SICP)*

by Harold Abelson and Gerald Jay Sussman

2.5 Systems with Generic Operations

1. ***Generic arithmetic package***
2. ***Coercion***
3. ***Hierarchies of Types***

Generic Arithmetic



List structure and primitive machine arithmetic

Generic Arithmetic API

```
(define (add x y) (apply-generic 'add x y))
(define (sub x y) (apply-generic 'sub x y))
(define (mul x y) (apply-generic 'mul x y))
(define (div x y) (apply-generic 'div x y))
```

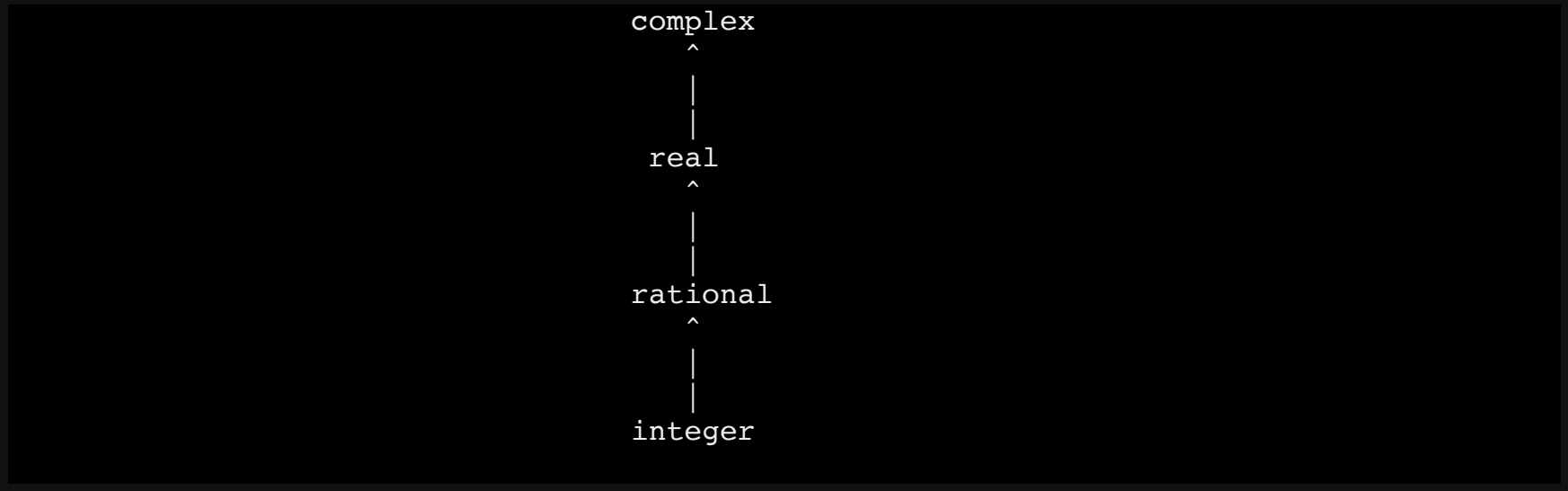
Packages

```
(install-scheme-number-package)

(install-rational-package)

(install-complex-package)

  (install-rectangular-package)

  (install-polar-package)
```

Coercion

```
(define (scheme-number->complex n)
  (make-complex-from-real-imag
   (contents n) 0))

(put-coercion 'scheme-number 'complex
          scheme-number->complex)
```

Hierarchies of types



That's all for section 2.5.

Thanks!