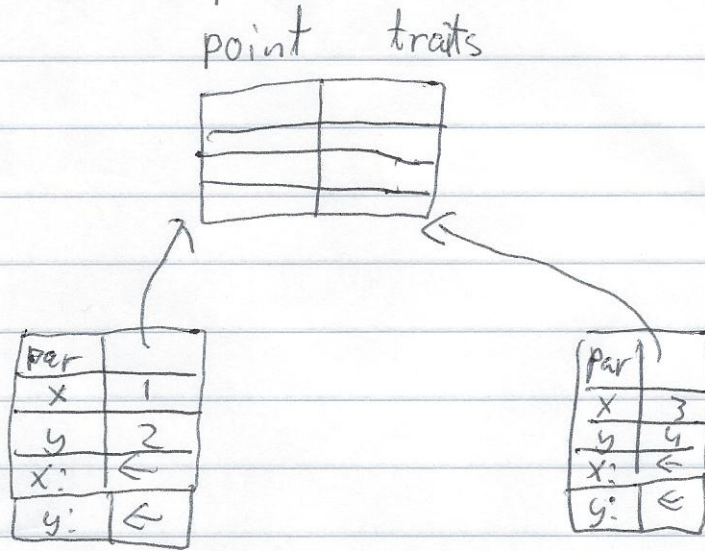


4

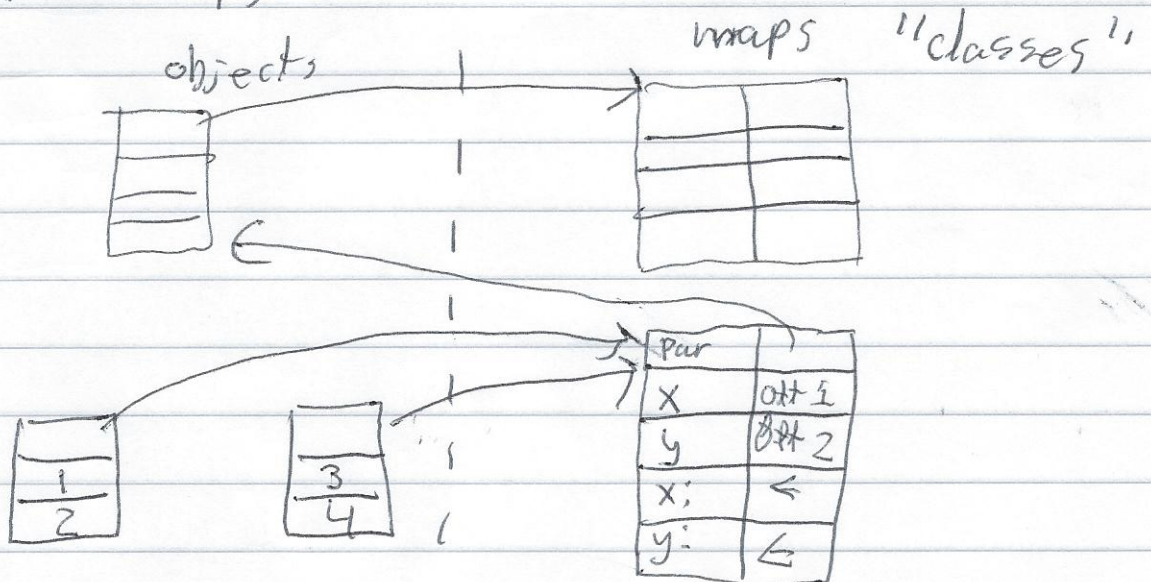
Optimization techniques used in Selt Maps

Unlike Smalltalk Selt has no classes. Storing objects naively will use excessive memory.

without maps



with maps



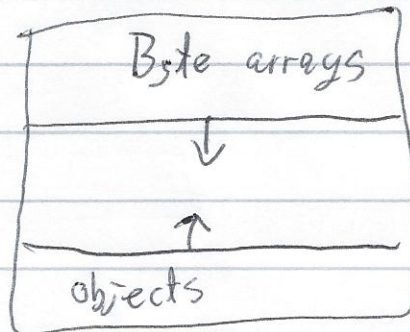
We can represent selt objects as compactly as smalltalk even without explicit classes.

Tagging

A word is tagged

int 00, float 10, pointer 01, mark 11
Allows for integer math

Heap segregated



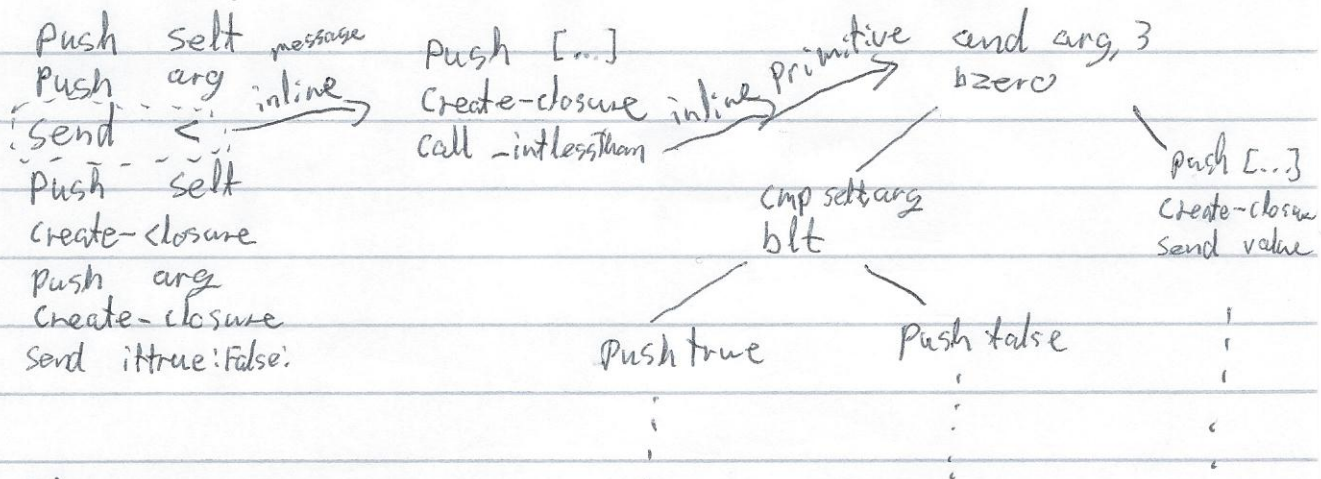
+ allows for fast search (one word at a time)

since no confusing bytes

+ can search back for mark to find object.

Customized compilation

min: arg = (< arg if true: [self] false: [arg]).



Use message splitting + type prediction.

Smalltalk compiles one general method self for each type of receiver. Similar to VM JITing.