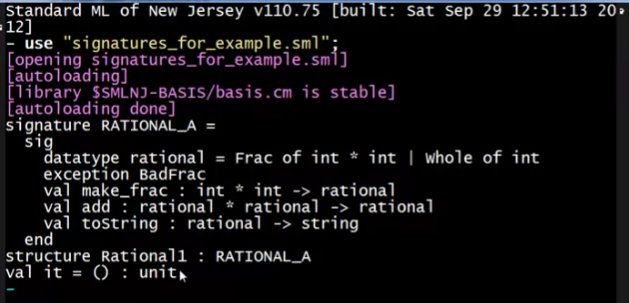
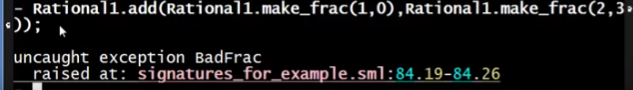


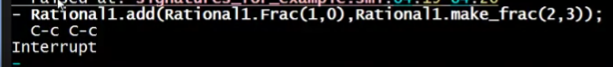
1st example using the revealed data type



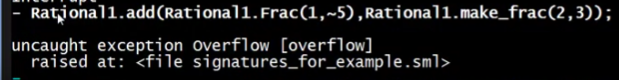
Doing correctly (calling make\_frac)



Doing wrong (calling the constructor Frac of int\*int)



* Infinite loop – division by 0

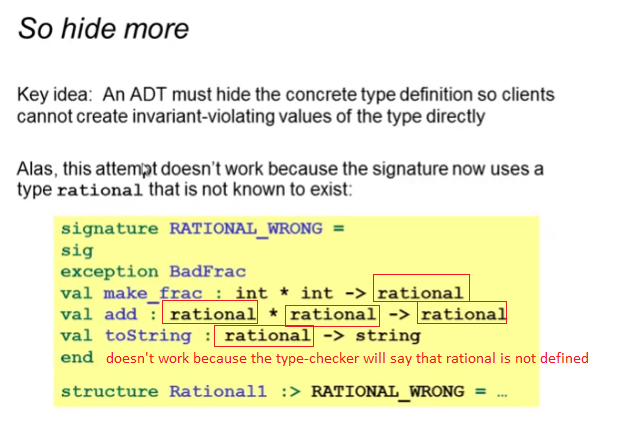


* Negative denominator – overflow

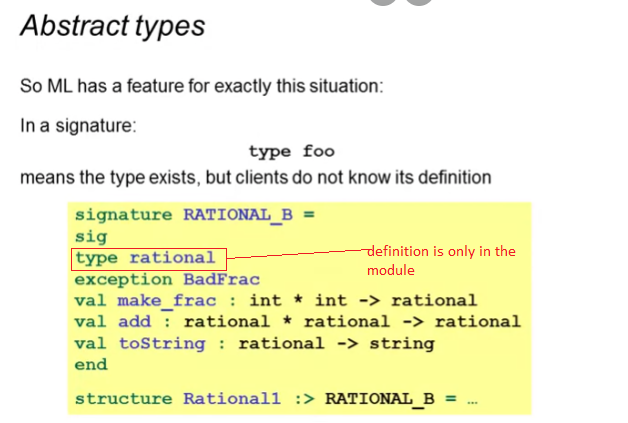


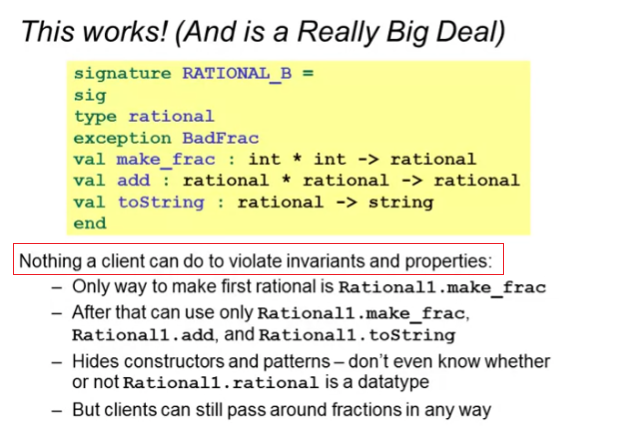
* Not reducing the value because Frac does not have reduce, only make\_frac
* toString assumes that our value is already reduced

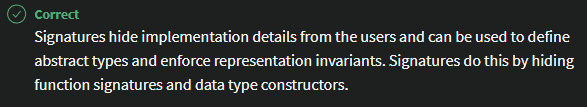
Intuition:

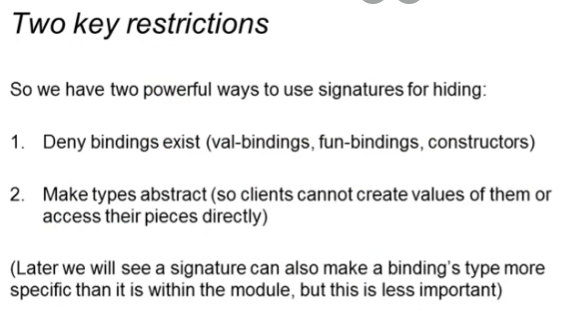


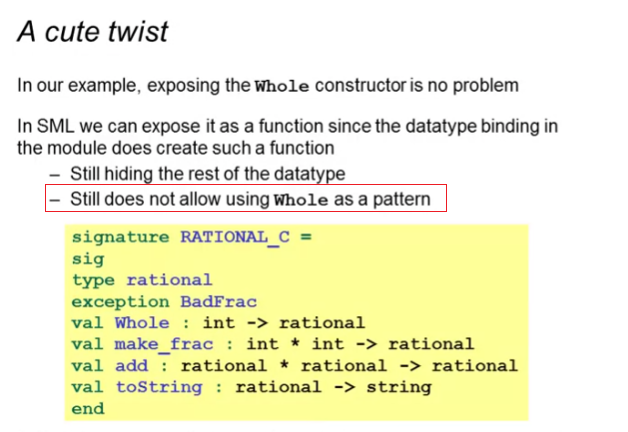
* we want to indicate to the type checker that yes rational is a type but I don’t want to display it
  + this is called an ABSTRACT type
    - type exists, but clients do not know its definition











* this is good to simplify the calling of the clients from make\_frac(12,1) to Whole(12)