

TYPE SAFETY

- type safe programming languages protect
its own abstractions.

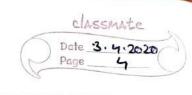
- type sake programs cannot go wrong.

no ron-time errors

but exceptions are fine.

- small step semantics cannot get stuck

type safety is proven at language design time.



RELATIVE TYPE-SAFETY OF LANGUAGES

NOT SAFE

BPCL family: C, C++

casts, unions, painter arithmetic.

ALMOST SAFE

Algol family, Pascal, Ada

dangling pointers (de allocated memory may be referenced again).

SAFE

- dynamically typed: Lisp, smalltalk, Javascript

- Statically typed: Ocamb, Haskell, Java