

## Roman numerals to numbers

Idea of Our compiler is to convert from Roman numerals (I, V, X, ...) to numbers (1, 5, 10, ...) for Roman numerals less than 1000 Our compiler first checks if the user's input is a valid Roman numeral and less than 1000 then we'll convert it

### Accepted strings

XXXVI, CM, DXXXVI equivalent to 36, 900, 536 respectively

### Rejected strings

"MM" (2000), "MMCCCV" (2305), "ARAW" (undefined)

### Grammar

$\langle \text{roman} \rangle ::= \langle \text{hundreds} \rangle \langle \text{tens} \rangle \langle \text{units} \rangle$

$\langle \text{hundreds} \rangle ::= \langle \text{low hundreds} \rangle \mid \text{CD} \mid \text{D} \langle \text{low hundreds} \rangle \mid \text{CM}$

$\langle \text{low hundreds} \rangle ::= \text{C} \mid \text{CC} \mid \text{CCC} \mid \epsilon$

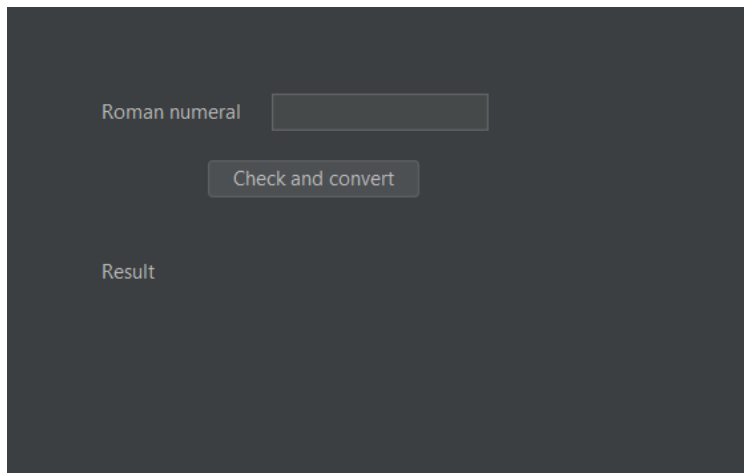
$\langle \text{tens} \rangle ::= \langle \text{low tens} \rangle \mid \text{XL} \mid \text{L} \langle \text{low tens} \rangle \mid \text{XC}$

$\langle \text{low tens} \rangle ::= \text{X} \mid \text{XX} \mid \text{XXX} \mid \epsilon$

$\langle \text{units} \rangle ::= \langle \text{low units} \rangle \mid \text{IV} \mid \text{V} \langle \text{low units} \rangle \mid \text{IX}$

$\langle \text{low units} \rangle ::= \text{I} \mid \text{II} \mid \text{III} \mid \epsilon$

### prototype for the interface



### Students names

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