

SE 3XA3: Module Interface Specification Scrabble Project

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This document is the Module Interface Specification of the Scrabble Project being done by Team Trifecta.

Table 1: **Revision History**

Date	Version	Notes
Date 1	1.0	Notes
Date 2	1.1	Notes

Tile Module

Module

Tile Type

Uses

N/A

Syntax

Exported Constants

N/A

Exported Types

Tile = tuple of (letter: str, score: \mathbb{N})

Exported Access Programs

Routine name	In	Out	Exceptions
init	str	Tile	invalid_size
getLetter		str	
getScore		\mathbb{N}	

Semantics

State Variables

letter
score

Environment Variables

None

State Invariant

$0 < score \leq 10$

Assumptions

N/A

Access Routine Semantics

init(*letter*):

- transition: $score := LETTER_VALUES[letter]$
- output: None
- exception: None

getLetter():

- transition: None
- output: letter
- exception: None

getScore():

- transition: None
- output: score
- exception: None

Local Constants

$LETTER_VALUES = \text{tuple of } ("A" : \mathbb{N}, "B" : \mathbb{N}, "C" : \mathbb{N}, "D" : \mathbb{N}, "E" : \mathbb{N}, "F" : \mathbb{N}, "G" : \mathbb{N}, "H" : \mathbb{N}, "I" : \mathbb{N}, "J" : \mathbb{N}, "K" : \mathbb{N}, "L" : \mathbb{N}, "M" : \mathbb{N}, "N" : \mathbb{N}, "O" : \mathbb{N}, "P" : \mathbb{N}, "Q" : \mathbb{N}, "R" : \mathbb{N}, "S" : \mathbb{N}, "T" : \mathbb{N}, "U" : \mathbb{N}, "V" : \mathbb{N}, "W" : \mathbb{N}, "X" : \mathbb{N}, "Y" : \mathbb{N}, "Z" : \mathbb{N})$