



**Laurea in informatica-Università di Salerno Corso di Compilatori- Prof. G. Costagliola**

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**Presentato** - da Bacco Alessandro, Bacco Cosimo, La Monica Tiziano

## Type System

Nel presente paragrafo sono descritte le varie tabelle di compatibilità per gli operatori binari e unari. Inoltre sono presenti le regole d'inferenza che mancavano nel file del Type system del linguaggio Myfun (December 7, 2021).

EQ\_RELOP Table

TYPE	INT	REAL	STRING	BOOL
INT	Bool	Undefined	Undefined	Undefined
REAL	Undefined	Bool	Undefined	Undefined
STRING	Undefined	Undefined	Bool	Undefined
BOOL	Undefined	Undefined	Undefined	Bool

RELOP Table

TYPE	INT	REAL	STRING	BOOL
INT	Bool	Bool	Undefined	Undefined
REAL	Bool	Bool	Undefined	Undefined
STRING	Undefined	Undefined	Undefined	Undefined
BOOL	Undefined	Undefined	Undefined	Undefined

STR\_CONCAT Table

TYPE	INT	REAL	STRING	BOOL
INT	Undefined	Undefined	String	Undefined
REAL	Undefined	Undefined	String	Undefined
STRING	String	String	String	Undefined
BOOL	Undefined	Undefined	Undefined	Undefined

AND\_OR Table

TYPE	INT	REAL	STRING	BOOL
INT	Undefined	Undefined	Undefined	Undefined
REAL	Undefined	Undefined	Undefined	Undefined
STRING	Undefined	Undefined	Undefined	Undefined
BOOL	Undefined	Undefined	Undefined	Bool

ARITM\_OP Table

TYPE	INT	REAL	STRING	BOOL
INT	Int	Real	Undefined	Undefined
REAL	Real	Real	Undefined	Undefined
STRING	Undefined	Undefined	Undefined	Undefined
BOOL	Undefined	Undefined	Undefined	Undefined

DIVINT\_POW Table

TYPE	INT	REAL	STRING	BOOL
INT	Int	Int	Undefined	Undefined
REAL	Int	Int	Undefined	Undefined
STRING	Undefined	Undefined	Undefined	Undefined
BOOL	Undefined	Undefined	Undefined	Undefined

ASSIGN\_OP Table

TYPE	INT	REAL	STRING	BOOL
INT	Int	Int	Undefined	Undefined
REAL	Real	Real	Undefined	Undefined
STRING	Undefined	Undefined	String	Undefined
BOOL	Undefined	Undefined	Undefined	Bool

#### MINUS Table

TYPE	INT	REAL	STRING	BOOL
	Int	Real	Undefined	Undefined

#### Not Table

TYPE	INT	REAL	STRING	BOOL
	Undefined	Undefined	Undefined	Bool

#### Type System nodo ReadStatOp

```
If espressione==type.STRING && ogni id!= type.NOTYPE in IDList
Then ReadStatOp = type .NOTYPE
Else Error
```

#### Type System nodo WriteStatOp

```
If espressione != type.NOTYPE
Then WriteStatOp = type .NOTYPE
Else Error
```

#### Type System nodo VarDeclOp

```
If Ogni id != type.NOTYPE in ListID
Then VarDeclOp = type.NOTYPE
Else Error
```