

Reglas aritméticas

$\emptyset \vdash \{0 - 9\} +: INTEGER$ (ENTEROS)				
Suma	Resta	Multiplicación	División	Not
$\frac{\Gamma \vdash X: INTEGER \quad \Gamma \vdash Y: INTEGER}{\Gamma \vdash X + Y: INTEGER}$	$\frac{\Gamma \vdash X: INTEGER \quad \Gamma \vdash Y: INTEGER}{\Gamma \vdash X - Y: INTEGER}$	$\frac{\Gamma \vdash X: INTEGER \quad \Gamma \vdash Y: INTEGER}{\Gamma \vdash X * Y: INTEGER}$	$\frac{\Gamma \vdash X: INTEGER \quad \Gamma \vdash Y: INTEGER}{\Gamma \vdash X / Y: INTEGER}$	$\frac{\Gamma \vdash X: INTEGER}{\Gamma \vdash NOT X: ERROR}$
<	<=	=	~	
$\frac{\Gamma \vdash X: INTEGER \quad \Gamma \vdash Y: INTEGER}{\Gamma \vdash X < Y: BOOL}$	$\frac{\Gamma \vdash X: INTEGER \quad \Gamma \vdash Y: INTEGER}{\Gamma \vdash X <= Y: BOOL}$	$\frac{\Gamma \vdash X: INTEGER \quad \Gamma \vdash Y: INTEGER}{\Gamma \vdash X = Y: BOOL}$	$\frac{\Gamma \vdash X: INTEGER}{\Gamma \vdash \sim X: INTEGER}$	

Reglas Booleanas

$\emptyset \vdash true false: BOOL$ (BOOLEAN)				
Suma	Resta	Multiplicación	División	Not
$\frac{\Gamma \vdash X: BOOL \quad \Gamma \vdash Y: BOOL}{\Gamma \vdash X + Y: ERROR}$	$\frac{\Gamma \vdash X: BOOL \quad \Gamma \vdash Y: BOOL}{\Gamma \vdash X - Y: ERROR}$	$\frac{\Gamma \vdash X: BOOL \quad \Gamma \vdash Y: BOOL}{\Gamma \vdash X * Y: ERROR}$	$\frac{\Gamma \vdash X: BOOL \quad \Gamma \vdash Y: BOOL}{\Gamma \vdash X / Y: ERROR}$	$\frac{\Gamma \vdash X: BOOL}{\Gamma \vdash NOT X: BOOL}$
<	<=	=	~	
$\frac{\Gamma \vdash X: BOOL \quad \Gamma \vdash Y: BOOL}{\Gamma \vdash X < Y: BOOL}$	$\frac{\Gamma \vdash X: BOOL \quad \Gamma \vdash Y: BOOL}{\Gamma \vdash X <= Y: BOOL}$	$\frac{\Gamma \vdash X: BOOL \quad \Gamma \vdash Y: BOOL}{\Gamma \vdash X = Y: BOOL}$	$\frac{\Gamma \vdash X: BOOL}{\Gamma \vdash \sim X: BOOL}$	

Reglas String

$\emptyset \vdash \{a - zA - Z0 - 9\} + ": STRING$ (STRING)				
Suma	Resta	Multiplicación	División	Not
$\frac{\Gamma \vdash X: STRING \quad \Gamma \vdash Y: STRING}{\Gamma \vdash X + Y: STRING}$	$\frac{\Gamma \vdash X: STRING \quad \Gamma \vdash Y: STRING}{\Gamma \vdash X - Y: STRING}$	$\frac{\Gamma \vdash X: STRING \quad \Gamma \vdash Y: STRING}{\Gamma \vdash X * Y: STRING}$	$\frac{\Gamma \vdash X: STRING \quad \Gamma \vdash Y: STRING}{\Gamma \vdash X / Y: STRING}$	$\frac{\Gamma \vdash X: STRING}{\Gamma \vdash NOT X: STRING}$

$\frac{}{\Gamma \vdash X + Y: ERROR}$	$\frac{}{\Gamma \vdash X - Y: ERROR}$	$\frac{}{\Gamma \vdash X * Y: ERROR}$	$\frac{}{\Gamma \vdash X / Y: ERROR}$	$\Gamma \vdash NOT X: ERROR$
<	<=	=	~	
$\frac{\Gamma \vdash X: STRING \quad \Gamma \vdash Y: STRING}{\Gamma \vdash X < Y: BOOL}$	$\frac{\Gamma \vdash X: STRING \quad \Gamma \vdash Y: STRING}{\Gamma \vdash X <= Y: BOOL}$	$\frac{\Gamma \vdash X: STRING \quad \Gamma \vdash Y: STRING}{\Gamma \vdash X = Y: BOOL}$	$\frac{\Gamma \vdash X: STRING}{\Gamma \vdash \sim X: ERROR}$	

Operaciones entre tipos de datos

Cualquier operación entre distintos tipos de datos va a dar: ERROR

Cualquier comparación: String (< | <= | =) String es CASE SENSITIVE

Las comparaciones: String (< | <=) String toman en cuenta orden alfabético ([A-Z] < [a-z])

Expresiones y Funciones				
IF	WHILE			
If (BOOL): VALID	WHILE (BOOL): VALID			