STACK		
Stack= {Top= <StackNode<T>>, Size=<Integer>}		
{Inv: size≥0 ∧ size ∈ Z}		
Stack:		→ STACK
Push:	STACK x T	→ RACIONAL
Pop:	STACK	→ T
Peek:	STACK	→ T
IsEmpty:	STACK	→ BOOLEAN
GetSize:	STACK	→ INTEGER

Constructor Operations:

Stack()

"Creates a new Stack"

{pre: TRUE}

{post: Stack= {Top= NULL, Size = 0} }

Modifying Operations:

Push()

"Adds a new element to the Stack structure, by also setting a new Top"

{pre: Stack={Top=<StackNode<T>>, Size=n}, T=<content>}

{post: Stack={Top=<StackNode<T>>, Size=(n+1)} }

Pop()

"Return the element on the top of the Stack and deletes it from the structure"

{pre: TRUE}

{post: T=<content> if Size ≠0, else NULL}

Analyzing Operation:

Peek()

"Returns the value of the element at the top of the Stack"

{pre: TRUE}

{post: T=<content> if Size ≠0, else NULL }

IsEmpty()

"Indicates whether the Stack has elements or not"

{pre: TRUE}

{post: TRUE if Size≠0, else FALSE }

GetSize()

"Returns the number of elements in the Stack structure"

{pre: TRUE}

{post: Size=n }

STACKNODE		
StackNode = {Top= <StackNode<T>>, Bottom= <StackNode<T>>, Content=T}		
{Inv: Content ≠NULL}		
StackNode:	T	→ STACKNODE
SetTop:	STACK x T	→ STACKNODE
SetBottom:	STACK	→ STACKNODE
SetContent:	STACK	→ STACKNODE
GetTop:	STACK	→ STACKNODE
GetBottom:	STACK	→ STACKNODE
GetContent:	STACK	→ T

Constructor Operations:

StackNode()

"Creates a new StackNode"

{pre: T=<content>}

{post: StackNode= {Content= T, Top = NULL, Bottom=NULL} }

Modifying Operations:

SetTop()

"Changes the Top of the StackNode"

{pre: NewStackNode = {Top= <StackNode<T>>, Bottom= <StackNode<T>>, Content=T}}

{post: StackNode = {Top= NewStackNode, Bottom= <StackNode<T>>, Content=T}}

SetBottom()

"Changes the Bottom of the StackNode"

{pre: NewStackNode = {Top= <StackNode<T>>, Bottom= <StackNode<T>>, Content=T}}

{post: StackNode = {Top= <StackNode<T>>, Bottom= NewStackNode, Content=T}}

SetContent()

"Changes the Content of the StackNode"

{pre: NewT=<content>}

{post: StackNode = {Top= <StackNode<T>>, Bottom= <StackNode<T>>, Content=NewT}}

Analyzing Operation:

GetTop()

"Returns the Top of the StackNode"

{pre: TRUE}

{post: StackNode = {Top= <StackNode<T>>, Bottom= this StackNode, Content=T}}

GetBottom()

"Returns the Bottom of the StackNode"

{pre: TRUE}

{post: StackNode = {Top= this StackNode, Bottom= <StackNode<T>>, Content=T}}

GetContent()

"Returns the Content of the StackNode"

{pre: TRUE}

{post: T=<content>}}