ADT Stack

Stack = {values [] = <value1, value2, ..., valuen>,

size= <size>}

{inv: PriorityQueue.size >=-1}

Primitives Operations:

Create Stack:

Stack x Value

-> Stack -> Stack

push:size:

-> Integer

peek:

-> Value

pop:

-> Value

Create Stack:

"It creates a new Stack"

{Pre: Stack == null}

{Post: Stack = Values [] = { $null_1$, $null_2$, \cdots , $null_{16}$ }, size=0}

push:

"It inserts a new value"

{Pre: Stack != null}

{Post: Stack = Values [] = { $value_1 = inpunt\ Value,\ value_2 = value_1, \dots, value_{i-1} = value_i$ },

size=size+1}

peek:

"it allows have a view of the first element without extract it"

{Pre: Stack != null, size>=1}

{Post: true}

size:

"returns the size of the stack"

{Pre: Stack != null}

{Post: true}

Pop:

"returns and remove the first element of the stack"

{Pre: Stack!= null, size>=1}

{Post: stack= Values $[] = \{values_1 = values_2, ..., values_i = values_{i+1} \}$, size=size-1}