

```

class stackObj is subclass of stackAlg
instance variables
    public stack : Stack := clear ();

operations
public
    Empty : ()  $\xrightarrow{o}$   $\mathbb{B}$ 
    Empty ()  $\triangleq$ 
        return empty (stack);
public
    Clear : ()  $\xrightarrow{o}$  ()
    Clear ()  $\triangleq$ 
        stack := clear ();
public
    Push : A  $\xrightarrow{o}$  ()
    Push (a)  $\triangleq$ 
        stack := push (a, stack);
public
    Pop : ()  $\xrightarrow{o}$  ()
    Pop ()  $\triangleq$ 
        stack := pop (stack)
    pre  $\neg$  empty (stack) ;
public
    Top : ()  $\xrightarrow{o}$  A
    Top ()  $\triangleq$ 
        return top (stack)
    pre  $\neg$  empty (stack) ;
public
    TopPop : ()  $\xrightarrow{o}$  A
    TopPop ()  $\triangleq$ 
        def r = top (stack) in
        (   stack := pop (stack);
            return r
        )
    pre  $\neg$  empty (stack)
end stackObj
    (TopPop is a new method combining the split of two functions)

```