

Fixed size stack Generics

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```
public static void main(String[] args)
{
    FixedCapacityStack<String> s;
    s = new FixedCapacityStack<String>(100);
    while (!StdIn.isEmpty())
    {
        String item = StdIn.readString();
        if (!item.equals("-"))
            s.push(item);
        else if (!s.isEmpty()) StdOut.print(s.pop() + " ");
    }
    StdOut.println("(" + s.size() + " left on stack");
}
```

```
% more tobe.txt
to be or not to - be - - that - - - is
% java FixedCapacityStack < tobe.txt
to be not that or be (2 left on stack)
```

```
public class FixedCapacityStack<Item>
{
    private Item[] a; // stack entries
    private int N; // size

    public FixedCapacityStack(int cap)
    { a = (Item[]) new Object[cap]; }

    public boolean isEmpty() { return N == 0; }
    public int size() { return N; }

    public void push(Item item)
    { a[N++] = item; }

    public Item pop()
    { return a[--N]; }
}
```

generic type

Correct manner of
creating an array
of generic type
in Java