ECS717 Lab 6 bis

Generics

These exercises will be assessed only for ECS717 students

ESSENTIAL:

Exercise 1 bis:

Write a generic method `reverse` that takes an array of a generic type as an argument and reverses it, so that if `a` contains {“Hello”, “World”}, after the call `reverse(a)` it will contain {“World”, ”Hello”}.

Write a `main` method to test `reverse` using at least an array of `Integer` (use the wrapper class rather than `int`) and an array of `String`. Make sure that your method works both with even and odd array sizes. Output the reversed arrays.

Exercise 2 bis:

Write a class `Stack` that implements a generic stack using an `ArrayList` as the internal representation. The class should have a method `push(T e)` that pushes an element of type T onto the stack; it should also have a method `pop()` that returns the element on top of the stack (i.e. the one that was pushed more recently) and removes it. If the stack is empty this should return `null`.

Write a class `TestStack` to test the stack; instantiate at least two instances of the stack with different types and try pushing an popping a few elements onto each of them; output the results.