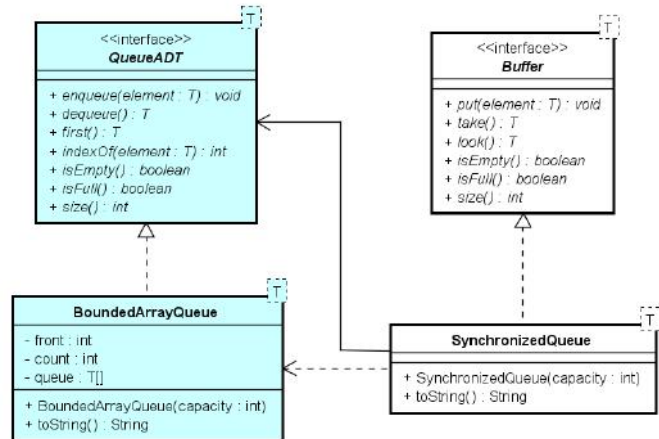# Exercises   SDJ2

Exercise SynchronizedQueue – Adapter design pattern
Implement the Adapter design pattern shown – and test it.

Interface `Buffer` is like a `QueueADT` but with other names for methods. A few remarks to the implementation (in `SynchronizedQueue`):

- The class is generic like the `Buffer` interface
- Association to (i.e. an instance variable of type) `QueueADT`, and initialized in the constructor to an object of type `BoundedArrayQueue`.
- All methods are synchronized and are simply delegating to the instance variable

Class `BoundedArrayQueue` and interface `QueueADT` are given here:
- MyCollection-1.1.jar: http://ict-engineering.dk/jar/MyCollection-1.1.jar
- javadoc for MyCollection: http://ict-engineering.dk/javadoc/MyCollection/

Interface `Buffer` is given here:

```
public interface Buffer<T>
{
   public void put(T element);
   public T take();
   public T look();
   public boolean isEmpty();
   public boolean isFull();
   public int size();
}
```

a) Implement class `SynchronizedQueue`.

b) Test your solution.