

Homework 20

Shyam Sai Bethina

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```
//1
/**
 * Reverses ("flips") {@code this}.
 *
 * @updates this
 * @ensures this = rev(#this)
 */
public void flip() {
    Stack<T> temp = new Stack1L<>();
    if (this.length() != 0) {
        T popped = this.pop();
        temp.push(popped);
        this.flip();
    }

    this.transferFrom(temp);
}

//2
/**
 * Reverses ("flips") {@code this}.
 *
 * @updates this
 * @ensures this = rev(#this)
 */
public void flip() {
    for (int i = 0; i < this.length(); i++) {
        T first = this.entry(0);
        T second = this.entry(this.length() - 1 - i);

        this.replaceEntry(0, second);
        this.replaceEntry(this.length() - 1 - i, first);
    }
}
```

```
//3
/**
 * Reverses ("flips") {@code this}.
 *
 * @updates this
 * @ensures this = rev(#this)
 */
public void flip() {
    if (this.length() != 0) {
        T temp = this.remove(0);
        this.flip();
        this.add(this.length(), temp);
    }
}
```