Week 5 If you work in teams, then only turn in only one sheet Names:

- Trace the following snippet

```
String bin = "100110011";
int num = 0;
for (int i = bin.length() - 1; i >= 0; i--) {
      if (bin.charAt(i) == '1') {
          num += (int) Math.pow(2, bin.length() - i - 1);
      } else if (bin.charAt(i) == '0') {
          //do nothing
      }
}
System.out.print(num)
```

- Create a program that replaces all **a** and **e** for an ‘@’. **You cannot use replace()**

```
String str = "declare";
String result = "";
for (int i = 0; i < /*___________*/; i++) {
      if (/*__________________*/) { //check if the character is an a or e
          result += /*__________________*/;
      } else { // cahr is not a vocal
        result += /*__________________*/;
      }
}
```

- **Optional Challenge:** Using string properties, create java-like pseudocode that checks if a string is a palindrome. A palindrome is a string that it can be read the same backwards, i.e. **123321** and **abcba** are palindromes, but **123320** or **12341** are not. Go to goo.gl/5y1MXj to see more examples of a palindromes. **Hint:** You will need to check the last and first character of the string at the same time.