

Review Assignment 06

Submission Deadline 11:59 PM, Sunday, February 26th

Total 50 points

Instruction.

1. Download the assignment sheet.
2. Enter your answer.
3. Upload your answer sheet.

Question 1. String reversal (20 points).

Let `wordInput` be a `String` variable. Suppose you want to construct from `wordInput` a `StringBuilder` variable `myBuilder` whose content is the reverse of `wordInput`. Fill in the blanks.

```
int k; // use this as the iteration variable
StringBuilder myBuilder = new StringBuilder(); // instantiation;
2 pt
for (k=wordInput.length()-1; k>=0; k--) { // for-loop; 4 pts
    myBuilder.append(wordInput.charAt(k)); // updating builder; 4
pts
}
System.out.println( myBuilder.toString() );
```

You can produce the same result by using another method, `insert()`. Fill in the blanks.

```
int k; // use this as the iteration variable
StringBuilder myBuilder = new StringBuilder(); // instantiation;
2 pts
for (k=0; k<wordInput.length(); k++) { // for-loop; 4 pts
    myBuilder.insert(0, wordInput.charAt(k)); // updating builder;
4 pts
}
System.out.println( myBuilder.toString() );
```

Question 2. Outlined Box (20 points altogether).

Suppose we are to produce, on the screen, a rectangle, whose side, top, and bottom lines are presented using '+' and whose interior is all black. The user shall enter the height and the width. For example, when the height is 5 and the width is 8, the shape produced on the screen is:

```
+++++++
+       +
+       +
+       +
+       +
```

++++++

Suppose we are to use a double loop to produce the shape. Fill in the blanks. A key idea is to use a condition to determine if the symbol to print is "+".

```
int row, col, width, height;
Scanner in;
in = new Scanner( System.in );
System.out.print( "Enter height and width: " );
height = in.nextInt(); // 2 points
width = in.nextInt(); // 2 points
for (int i=0; i<height; i++) { // row indexing; 4 pts
    for ( int j=0; j<width; j++ ) { // column indexing; 4 pts
        if ( i == 0 || i == height-1 || j == 0 || j == width-1 ) {
            // condition for "+"; 5 points
            System.out.print( "+" ); // must use "+", not '+'
        }
        else {
            System.out.print( " " ); // must use " ", not " "
        }
    }
    System.out.println() // go to next line; 3 pts
}
```