Part 1:
Determine the output for each of the given sets of code when x is 9 and y is 11 and when x is 11 and y is 9. Note that the compiler ignores the indentation in a Java program. Also, the Java compiler always associates an else with the immediately preceding if unless told to do otherwise by the placement of braces ({}). On first glance, the programmer may not be sure which if an else matches; this situation is referred to as the "dangling-else problem." We have eliminated the indentation from the following code to make the problem more challenging.

Problem #1
----------
if ( x < 10 )
if ( y > 10 )
System.out.println( "*****" );
else
System.out.println( "#####" );
System.out.println( "$$$$" );

Problem #2
----------
if ( x < 10 ) {
if ( y > 10 )
System.out.println( "*****" );
}
else {
System.out.println( "#####" );
System.out.println( "$$$$" );
}
Part 2:

Modify the given code to produce the output shown in each part of the problem. Use proper indentation techniques. Make no changes other than inserting braces and changing the indentation of the code. The compiler ignores indentation in a Java program. The indentation as been eliminated from the given code to make the problem more challenging. [Note: It is possible that no modification is necessary for some of the parts.]

```java
if ( y == 8 )
if ( x == 5 )
System.out.println( "@@@@" );
else
System.out.println( "#####" );
System.out.println( "$$$$$" );
System.out.println( "&&&&&" );
```

a) Assuming that x = 5 and y = 8, the following output is produced:

```
@@@@
$$$$$
&&&&&
```

b) Assuming that x = 5 and y = 8, the following output is produced:

```
@@@@
```

c) Assuming that x = 5 and y = 8, the following output is produced:

```
@@@@
&&&&&
```

d) Assuming that x = 5 and y = 7, the following output is produced.
[Note: The last three output statements after the else are all part of a block.]

```
#####
$$$$$
&&&&&
```