**3.15 Identify and correct errors.**

(a) Incorrect if statement

Error: Semicolon after if, unmatched quote in System.out.println().

Corrected:

if (age >= 65) { // Removed semicolon

   System.out.println("Age is greater than or equal to 65");

} else {

   System.out.println("Age is less than 65"); // Fixed closing quote

}

(b) Incorrect while loop

Error: total is uninitialized.

Corrected:

int x = 1, total = 0; // Initialized total

while (x <= 10) {

   total += x;

   ++x;

}

(c) Missing braces in while loop

Corrected:

while (x <= 100) {

   total += x;

   ++x;

}

(d) Infinite loop (y never decreases)

Corrected:

while (y > 0) {

   System.out.println(y);

   --y; // Decrement to prevent infinite loop

}