



## Intro to Java Week 2 Coding Assignment

Points possible: 70

Category	Criteria	% of Grade
Functionality	Does the code work?	25
Organization	Is the code clean and organized? Proper use of white space, syntax, and consistency are utilized. Names and comments are concise and clear.	25
Creativity	Student solved the problems presented in the assignment using creativity and out of the box thinking.	25
Completeness	All requirements of the assignment are complete.	25

**Instructions:** In Eclipse, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed. Take screenshots of the code and of the running program (make sure to get screenshots of all required functionality) and paste them in this document where instructed below. Create a new repository on GitHub for this week's assignments and push this document, with your Java project code, to the repository. Add the URL for this week's repository to this document where instructed and submit this document to your instructor when complete.

### Coding Steps:

1. What do each of the following Boolean expressions evaluate to?

Boolean Expression	Answer
true && false	false
true    false	true
false && false	false
true && (false    true)	true
false    (true && false)	false
false    1 < 5	true
5 >= 4 && 1 > 3	false



<code>10 &lt; 4    1 &gt; 4</code>	false
<code>12 &gt;= 2 &amp;&amp; 1 &lt; 24</code>	true
<code>"Hello".charAt(0) == 'h'</code>	true

1. In Eclipse, create the following Boolean variables and choose what values they hold:
  - a. isHotOutside
  - b. isWeekday
  - c. hasMoneyInPocket
2. Create the following variables (not boolean type, choose the best data type for the variable):
  - a. costOfMilk
  - b. moneyInWallet
  - c. thirstLevel (how thirsty you are on a scale of 1-10)
3. Using the variables you created above and Boolean operators, create variables for the following scenarios:
  - a. shouldBuyIcecream – this should be true if it is hot outside and there is money in your pocket
  - b. willGoSwimming – this should be true if it is hot outside and it is not a weekday
  - c. isAGoodDay – this should be true if it is hot outside, there is money in your pocket, and it is not a weekday
  - d. willBuyMilk – this should be true if it is hot outside, and thirstLevel is greater than or equal to 3, and moneyInWallet is greater than or equal to 2 times the cost of milk.

Example: If I had the variables isWeekday and isSummer and I was going to create a variable isSchoolDay, I would do something like the following:

```
boolean isSchoolDay = isWeekday && !isSummer;
```

1. Create a new class called Loops. In the main method of this class, create the following loops with any variables you feel are needed:
  - a. A while loop that prints all even numbers from 0 to 100
  - b. A while loop that prints every 3<sup>rd</sup> number going backwards from 100 until we reach 0
  - c. A for loop that prints every other number from 1 to 100
  - d. A for loop that prints every number from 0 to 100, but if the number is divisible by 3, it prints "Hello" instead of the number, and if the number is divisible by 5, it prints "World" instead of the number, and if it is divisible by both 3 and 5, it prints "HelloWorld" instead of the number.



Screenshots of Code:

```
week2.java loops.java
1 //Daisy Murillo
2 //Wed. June 24, 2020
3
4 package week2assignment;
5
6 public class week2 {
7
8     public static void main(String[] args) {
9         //Boolean Variables
10         boolean isHotOutside = true;
11         boolean isWeekday = true;
12         boolean hasMoneyInPocket = false;
13
14
15         //Not Boolean Variables
16         double costOfMilk = 2.99;
17         double moneyInWallet = 0.00;
18         int thirstLevel = 4;
19
20         //Created Variables with Above Variables
21         boolean shouldBuyIceCream = isHotOutside && hasMoneyInPocket; //false
22         boolean willGoSwimming = isHotOutside && !isWeekday; //false
23         boolean isAGoodDay = isHotOutside && hasMoneyInPocket && !isWeekday; //false
24         boolean willBuyMilk = moneyInWallet >= 2*costOfMilk && thirstLevel >=4 && isHotOutside; // false
25
26     }
27
28 }
29
30 }
```



```
week2.java *loops.java
1 //Daisy Murillo Wed. June 24, 2020
2 package week2assignment;
3
4 public class loops {
5     public static void main(String[] args) {
6         loopOne(); // A while loop that prints all even numbers from 0 to 100
7         loopTwo(); // A while loop that prints every 3rd number going backwards from 100 until we
8         loopThree(); // A for loop that prints every other number from 1 to 100
9         loopFour(); // A for loop that prints every number from 0 to 100, but if the number is div
10    }
11    public static void loopOne() {
12        System.out.println("##### LOOP ONE #####");
13        int i = 0;
14
15        while (i <= 100) {
16            System.out.println(i);
17            i+=2;
18        }
19    }
20    public static void loopTwo() {
21        System.out.println("##### LOOP TWO #####");
22        int i = 100;
23
24        while (i >= 0) {
25            System.out.println(i);
26            i-=3;
27        }
28    }
29    public static void loopThree() {
30        System.out.println("##### LOOP THREE #####");
31        int i = 1;
32
33        while (i <= 100) {
34            System.out.println(i);
35            i+=2;
36        }
37    }
38    public static void loopFour() {
39        System.out.println("##### LOOP FOUR #####");
40
41        for(int i=0; i <= 100; i++) {
42            if (i % 15 == 0) {
43                System.out.println("Hello World");
44            }
45            else if ( i % 3 == 0 ) {
46                System.out.println("Hello");
47            }
48            else if ( i % 5 == 0 ) {
49                System.out.println("World");
50            }
51            else {
52                System.out.println(i);
53            }
54        }
55    }
56 }
57
```



**Screenshots of Running Application:**

```
Console [Java Application] /Library/Java/JavaVirtualMachines/amazon-corre
##### LOOP ONE #####
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50
52
54
56
58
60
62
64
66
68
70
72
74
76
78
80
82
84
86
88
90
92
94
96
98
100
```

```
Console [Java Application] /Library/Java/JavaVirtualMachines/amazon-corre
##### LOOP TWO #####
100
97
94
91
88
85
82
79
76
73
70
67
64
61
58
55
52
49
46
43
40
37
34
31
28
25
22
19
16
13
10
7
4
1
```



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```
Console [Java Application] /Library/Java/JavaVirtualMachines/amazon-corretto-8-jdk/bin/java -jar ...
<terminated> loops [Java Application] /Library/Java/JavaVirtualMachines/amazon-corretto-8-jdk/bin/java -jar ...
##### LOOP THREE #####
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
39
41
43
45
47
49
51
53
55
57
59
61
63
65
67
69
71
73
75
77
79
81
83
85
87
89
91
93
95
97
99
```

```
Console [Java Application] /Library/Java/JavaVirtualMachines/amazon-corretto-8-jdk/bin/java -jar ...
<terminated> loops [Java Application] /Library/Java/JavaVirtualMachines/amazon-corretto-8-jdk/bin/java -jar ...
##### LOOP FOUR #####
Hello World
1
2
Hello
4
World
Hello
7
8
Hello
World
11
Hello
13
14
Hello World
16
17
Hello
19
World
Hello
22
23
Hello
World
26
Hello
28
29
Hello World
31
32
Hello
34
World
Hello
37
38
Hello
World
41
Hello
43
44
Hello World
46
47
Hello
49
##### LOOP FIVE #####
46
47
Hello
49
World
Hello
52
53
Hello
World
56
Hello
58
59
Hello World
61
62
Hello
64
World
Hello
67
68
Hello
World
71
Hello
73
74
Hello World
76
77
Hello
79
World
Hello
82
83
Hello
World
86
Hello
88
89
Hello World
91
92
Hello
94
World
Hello
97
98
Hello
World
```



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URL to GitHub Repository: [https://github.com/Daisy21murillo/week\\_2\\_assignment](https://github.com/Daisy21murillo/week_2_assignment)