Object Oriented Programming - Handout 1

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Exercise 1.1

```java
for (int i = 1; i < 20; i++)
{
    if (i % 3 == 0)
        continue;
    if (i % 4 == 0)
        i++;
    if (i > 10)
        break;
    System.out.println(i);
}
```

Output of this code is

```
1
2
5
7
9
10
```

Exercise 1.2

```java
boolean b = true;
        int z = 0, i = 0, c = 0;

        switch (i) {
            case 11:
                c = b ? 8 : !b ? 3 : 6;
                break;
            case 12:
            case 13:
                z = 10;
                break;

            default:
                z = 15;
        }
```

Rewritten code with only if-else:

```java
boolean b = true;
int z = 0, i = 0, c = 0;
```

```java
if (i == 11) {
    if (b) {
        c = 8;
    } else if (!b) {
        c = 3;
    } else {
        c = 6;
    }
} else if (i == 12 || i == 13) {
    z = 10;
} else {
    z = 15;
}
```

Exercise 1.3

Results are:

Condition	Value
(x > num) && !y	false
(item > MIN) || (DAY != 'M')	true
((num * 128) < power) && y	false
(!(power != MAX)) && (Sens == num)	true
((MIN + x) < num) || (DAY == 'M')	true
(Sens * 0) != 0	false
(!true || y) && (!y || false)	false

Exercise 1.4

Code for given task is:

```java
System.out.println("\nExercise 1.4 Output:");
Scanner scanner = new Scanner(System.in);
System.out.print("Enter number of lines: ");
int num = scanner.nextInt();

for (int i = 1; i <= num; i++) {
    for (int j = num; j > i; j--) {
        System.out.print(" ");
    }
    for (int j = i; j >= 1; j--) {
        System.out.print(j);
    }
    for (int j = 2; j <= i; j++) {
```

```java
                System.out.print(j);
            }
            System.out.println();
        }
        scanner.close();
```

For a) we just have to assume that num == 5 and skip scanning part.

Example of usage:

```
Enter number of lines: 5
        1
      212
    32123
  4321234
543212345
```