Other Control Structures

CONTROL STRUCTURES
WHILE, SWITCH, ETC.
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EXAMPLE

Print the first power of 2 greater than 10000

```java
int p = 2;
while (p <= 10000){
    p = p * 2;
}
System.out.println(p);
```

DO WHILE

```java
do {
    statements
} while (condition)
```
is similar to while but the condition for continuing to iterate is only tested at the end of the loop

The statements in the body will be executed at least once

WHILE

```java
while (condition){
    statements
}
```
is equivalent to

```java
for (; condition;){
    statements
}
```
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**SWITCH – ANOTHER SELECTION STRUCTURE**

```java
switch (expression) {
    case value1:
        statements
        break;
    ...
    case valueN:
        statements
        break;
}
```

Selects a case based on the value of `expression`. `expression` must be of type int, char, etc. `value` must be constant or literal. `break` skips to the end of the block.

**EXAMPLE – COUNT BY GENDER**

```java
switch (gender) {
    case 'M':
        male++;
        break;
    case 'F':
        female++;
        break;
    default:
        other++;
}
```

`default` handles all other cases/values of the `expression`.

**EXAMPLE – SET RESULT TO DAYS OF MONTH**

```java
switch (month) {
    case 1: case 3: case 5: ...
        result = 31;
        break;
    case 4: case 6: case 9: case 11:
        result = 30;
        break;
    case 2:
        result = 28;
        break;
    default:
        result = -1;
}
```