

## Data Types:

byte / short / int / long	-93, 465
float / double	-93.17, 465.1234
char	'Y', 'u'
boolean	true, false
String	"Hello world!"

## Control Flow:

```
if ( expression ) { ... }
else if ( expression ) { ... }
else { ... }
while ( expression ) { ... }
do { ... } while ( expression );      (runs at least once)
for( int i = _; i < _; i ++ ) { ... }
for ( var : collection ) { ... }      (iterates over collection)
switch ( expression ) {
    case value: ...
        break;
    default: ...
        break;
}
try { ... }
catch (Exception Type e1) { ... } ...
finally { ... }
```

## Data Conversions:

```
int i = Integer.parseInt(str);
double d = Double.parseDouble(str);
String s = String.valueOf(val);
int i = (int) numeric expression;
```

## java.util.ArrayList Methods:

```
ArrayList<String> arr = new ArrayList<String>();
arr.add(var)          - add var to the list
arr.get(i)            - return the ith item
arr.size()            - return number of items in list
arr.remove(i)         - remove the ith item
arr.set(i, val)       - put val at position i
```

## java.util.HashMap Methods:

```
HashMap<String, String> hm = new HashMap<String, String>();
hm.put(key, value)     - insert val with key
hm.get(key)           - retrieve val using key
hm.containsKey(key)   - return true if contains key
```

## Arrays

```
datatype[] x = new datatype[size];
```

## String Methods:

```
str.length()          - length of s
str.charAt(i)         - extract character at i
str.substring(start, end) - substring from start to end
str.toUpperCase()     - returns str in all caps
str.toLowerCase()     - returns str in all lowercase
str.indexOf(x)        - return index of first occurrence 'x'
str.replace(old, new) - replace old with new
str.split(regex)      - split string into tokens
str.trim()            - trim surrounding whitespace
str.equals(str2)      - return bool if str equals str2
str.compareTo(str2)   - return 0 if equal, + or - if not
```