Nuances

General Tips:

- Getter and setter

- Override and super

- Java outmatically collects garbage

- &&/|| checks left first

- + strings makes a new string every time, if you want to do in a loop use stringbuilder(reduce memory)

- Everything in Java not explicitly set to something, is initialized to a zero value

  - references (anything that holds an object):null
  - int/short/byte:0
  - float/double:0.0
  - booleans: false.
  - array of something, all entries are also zeroed

Useful built in functions:

- Arrays

  - Arrays.binarySearch(arr, target)
    * Negative value shows where it should be
  - Arrays.sort(arr)

Switch Statement:

- All matching cases will be run unless their is a break statement

- Example

  -
    ```java
    switch (month) {
            case 1: monthString = "January";
                    break;
            case 2: monthString = "February";
                    break;
            case 3: monthString = "March";
                    break;
    ```

```
            case 4: monthString = "April";
                    break;
            case 5: monthString = "May";
                    break;
            case 6: monthString = "June";
                    break;
            case 7: monthString = "July";
                    break;
            case 8: monthString = "August";
                    break;
            case 9: monthString = "September";
                    break;
            case 10: monthString = "October";
                     break;
            case 11: monthString = "November";
                     break;
            case 12: monthString = "December";
                     break;
            default: monthString = "Invalid month";
                     break;
        }
```

Breaking out of for loops:

- if you want to skip a particular iteration, use continue

  ```
  for(int i=0 ; i<5 ; i++){

      if (i==2){

          continue;
      }
  }
  ```

- if you want to break out of the immediate loop use break

  ```
  for(int i=0 ; i<5 ; i++){

      if (i==2){

          break;
      }
  }
  ```

- if there are 2 loop, outer and inner.... and you want to break out of both the loop from the inner loop, use break with label

```
lab1: for(int j=0 ; j<5 ; j++){
        for(int i=0 ; i<5 ; i++){

            if (i==2){

              break lab1;
            }
        }
    }
```

Things to override in new object (for hashing and equality uses):

- public int hashCode()

- public boolean equals(Object object)

```
ex: Tiger
  @Override
  public boolean equals(Object object) {
    boolean result = false;
    if (object == null || object.getClass() != getClass()) {
      result = false;
    } else {
      Tiger tiger = (Tiger) object;
      if (this.color == tiger.getColor()
          && this.stripePattern == tiger.getStripePattern()) {
        result = true;
      }
    }
    return result;
  }
```

Sources:

- https://www.cs.utexas.edu/~scottm/cs307/codingSamples.htm