

# Java Objects Part 4 Notes

Team Treehouse

May 26, 2020

## 1 Exceptions



- *throw new EXCEPTION\_NAME*: raises exception *EXCPETION\_NAME*
- *try* and *catch*: handles expectations

```
1 public class Game {
2     ...
3     public boolean applyGuess(char letter) {
4         if (misses.indexOf(letter) != -1 || hits.indexOf(letter)
5         != -1) {
6             throw new IllegalArgumentException(letter + " has
7             already been guessed"); // <- this little guy here :)
8         }
9     }
10    ...
11 }
```

```
12 }  
13
```

Listing 1: lesson\_01/Game.java

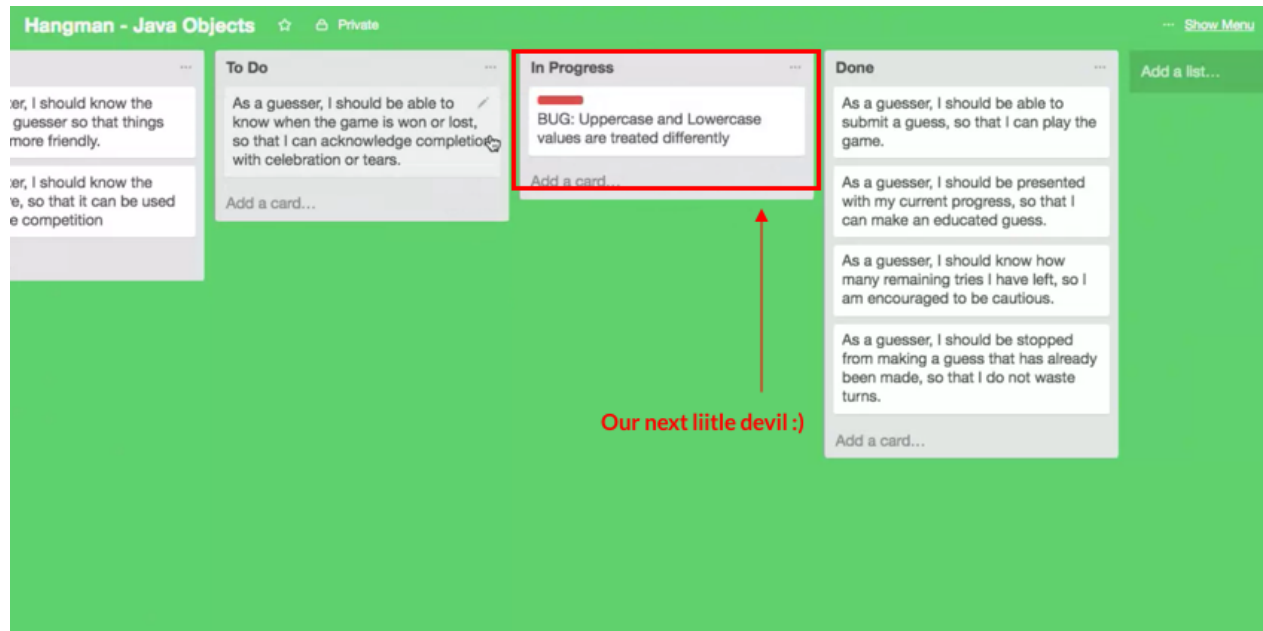
```
1  import java.util.Scanner;  
2  
3  public class Prompter {  
4      ...  
5      public boolean promptForGuess() {  
6          ...  
7          boolean isHit = false;  
8          try { // <- And this little guy here :)  
9              isHit = game.applyGuess(guess);  
10         } catch (IllegalArgumentException iae) {  
11             System.out.println(iae.getMessage());  
12         }  
13  
14         return isHit;  
15     }  
16 }  
17
```

Listing 2: lesson\_01/Prompter.java

### Notes:

- Files can be compiled and displayed by typing *javac Example.java* && *java Example* in terminal

## 2 Validating and Normalizing User Input



- *Character.toLowerCase(CHAR\_VAR)*: turns value in *CHAR\_VAR* to a lowercase character

```

1      public class Game {
2          ...
3          private char normalizeGuess(char letter) {
4              ...
5              letter = Character.toLowerCase(letter); // <- This little
guy here :)
6              ...
7          }
8      }
9

```

Listing 3: lesson.02/Game.java

### Notes:

- Files can be compiled and displayed by typing *javac Example.java* && *java Example* in terminal

## 3 Exercise 2

- Solution included in *exercise\_2.java*

## 4 Using Method Overloading



```

1  public class Game {
2      ...
3      public boolean applyGuess(String letters) { // <- this little
        devil here :)
4          if (letters.length() == 0) { // <- 1. notice checks for
        empty string. If so, raise error
5              throw new IllegalArgumentException("No letter found.
        Please try again.");
6          }
7
8          char firstLetter = letters.charAt(0);
9          return this.applyGuess(firstLetter);
10     }
11 }
12

```

Listing 4: lesson\_04/Game.java

```

1  public class Prompter {
2      ...
3
4      public boolean promptForGuess() {
5          ...
6          try {
7              isHit = game.applyGuess(guessInput); // <- 2. charAt()
        is removed
8              isAcceptable = true;
9          } catch (IllegalArgumentException iae) {
10              System.out.println(iae.getMessage());
11          }
12     }
13 }

```

```
12      ...
13    }
14  }
15
```

Listing 5: lesson\_04/Prompter.java

**Notes:**

- Files can be compiled and displayed by typing *javac Example.java* && *java Example* in terminal

## 5 Determining if the Game is Won

- **Notes:**

- Files can be compiled and displayed by typing *javac Example.java* && *java Example* in terminal