# 1 Basic Report Writing

## 1.1 Subsection

#### 1.1.1 Subsubsection

With some text in it.

#### 1.1.2 Another subsubsection

Hello world. Here's some text in the first paragraph of this subsubsection.

Here's another paragraph in the same subsubsection.

# 2 Math

# 2.1 Some Random Equation

$$y = \sqrt[3]{\frac{5x}{x^2}}$$

This is an inline math equation:  $y = x^2 + 2x + 4$  ...in the paragraph following Some Random Equation.

# 3 Figures and Images

Moving a picture in Microsoft Word

It actually does what you want

You the whole document

Figure 1: A funny LaTeX meme

For more examples and settings, click this link.

### 4 Lists

### 4.1 Non-numbered List

- First item
- Second item
  - First second item
  - Second second item
  - ! Last item with custom exclamation point marker

### 4.2 Numbered Lists

- 1. Numbered
- 2. list of
- 3. things
  - (a) first thing
  - (b) second thing
- ! exclaimed item

NOTE this item

- $\rightarrow$  custom arrow bullet in list
- 4. list cont.

## 5 Tables

head1	head2	head3
cell4	cell5	cell6
cell7 W/kg	cell8 N	cell9 seconds

## 6 Code

```
1 import pandas as pd
2 from tools.loading import print_loading_bar
5 data_source_str = "wordle-solver/data/words_3000" # Designates data to process
_{7} # Open list of words
8 fh = open(data_source_str + "_raw.txt")
9 LENGTH = len(fh.readlines()) # get number of words
10 fh = open(data_source_str + "_raw.txt") # reopen file handle
11
_{\rm 12} # Load letter frequency lookup table
13 freqs = pd.read_csv("wordle-solver/data/lookup_char-freqs.csv", index_col=0)
15 # Initialize data storage
16 words = pd.DataFrame()
17
18 WORD_LENGTH = 5 # Word length setting (Wordle is currently a 5-letter game)
19
20 # Process list of words
21 for i, word in enumerate(fh):
22
       print_loading_bar(i, LENGTH, title="Preparing word data: ", size=100, no_newline=True)
23
24
      word = word.strip().lower()
25
       if len(word) == WORD_LENGTH:
27
           words.loc[i, 'word'] = word
```

```
score = 0
for j in range(WORD_LENGTH):

col = 'char'+str(j)

words.loc[i, col] = word[j]

score = freqs.loc[word[j], col] + score

words.loc[i, 'score'] = score

words = words.sort_values('score', ascending=False)
words.to_csv(data_source_str + "_clean.csv")
```

For more code examples and parameters, click this link.