

## Functional programming aspects

- (mostly) side effect free functions

```
def update_progress(self, letter, indexes):  
    for index in indexes:  
        self.game_progress[index] = letter
```

```
def updating_scores(self, user_name, wrong_guess):  
    x = lambda wrong, score: score - (10*wrong)  
    if wrong_guess != 0:  
        self.total_score = x(wrong_guess, self.total_score)  
  
    text_file = open(self.file_path, "a")  
    text_file.write("\n{0}".format(user_name))  
    text_file.write(" {0} ".format(str(self.total_score)))  
    text_file.close()
```

- the use of higher-order functions

```
def find_indexes(self, letter):  
    return [i for i, char in enumerate(self.secret_word) if letter == char]  
  
def is_invalid_letter(self, input_):  
    return input_.isdigit() or (self.regex.search(input_) is not None) or (input_.isalpha() and len(input_) > 1)
```

- use anonymous functions

```
def updating_scores(self, user_name, wrong_guess):  
    x = lambda wrong, score: score - (10*wrong)  
    if wrong_guess != 0:  
        self.total_score = x(wrong_guess, self.total_score)  
  
    text_file = open(self.file_path, "a")  
    text_file.write("\n{0}".format(user_name))  
    text_file.write(" {0} ".format(str(self.total_score)))  
    text_file.close()
```