

## Contribution Guidelines

### 1. Coding Guidelines and Standards

#### a. Code Organization:

- Meaningful names for classes and functions.

#### b. Naming Conventions:

- PascalCase
  - Methods.
  - Classes.
- camelCase
  - Variables.
- Methods: Verbs
  - Ex: getLocation()
- Variables: Nouns
  - Ex: paymentLocation
- Unit test classes:
  - Name the file, “test\_” followed by the name of the class you are testing.
    - Ex: test\_Map.py

#### c. Commenting:

- Keep comments up-to-date with the code.
- Use comments to explain complex code or to provide context.
  - One line comments: Above or at the end of the line of code you are commenting about.
- Line Length: 90 characters maximum to ensure readability.
- Docstrings:
  - Use docstrings to document classes and functions.
    - Classes: Document its purpose above the class declaration. Use 5 sentences maximum.
    - Functions:
      - Document its purpose above the function declaration.
      - If applicable:
        - Description of value(s) returned and its type.
        - Description of parameter(s) and its type.
  - Use triple double quotes ("""") for multi-line docstrings.

#### d. Whitespace:

- Single space after:
  - Commas.
  - Colons.
  - Semicolons.

- Single space before and after:
  - Binary operators.
- 1 tab = 4 spaces.
- e. Imports:
  - Import modules in the following order:
    - Standard library modules.
    - Third-party library modules.
    - Your own modules.
- 2. Testing:
  - a. If no unit tests exist for your code yet, write unit tests for your code using the framework [pytest](#).
- 3. GitHub Commit Documentation
  - a. Title: Big updates made to the code.
    - Separate each item with periods.
      - Ex: getLocation() method, created but not finished. Bug found in Location.py, issue generating the location in desired output format.
  - b. Description: Additional information about updates made.
    - Separate each item with dashed bullet point. Sub points can be made using 4 spaces before the dash.
      - Ex:
        - - Bug resolves if input is 0.
    - List unit tests that were not passed if applicable.
      - Ex:
        - - Unit test for getLocation() method not passed.
          - - Error: TypeError:  
ReadWrite.CheckCommandLine() takes 1 positional argument but 2 were given.
    - List sources used at the end.
      - Ex:
        - - <https://www.geeksforgeeks.org/power-set/>