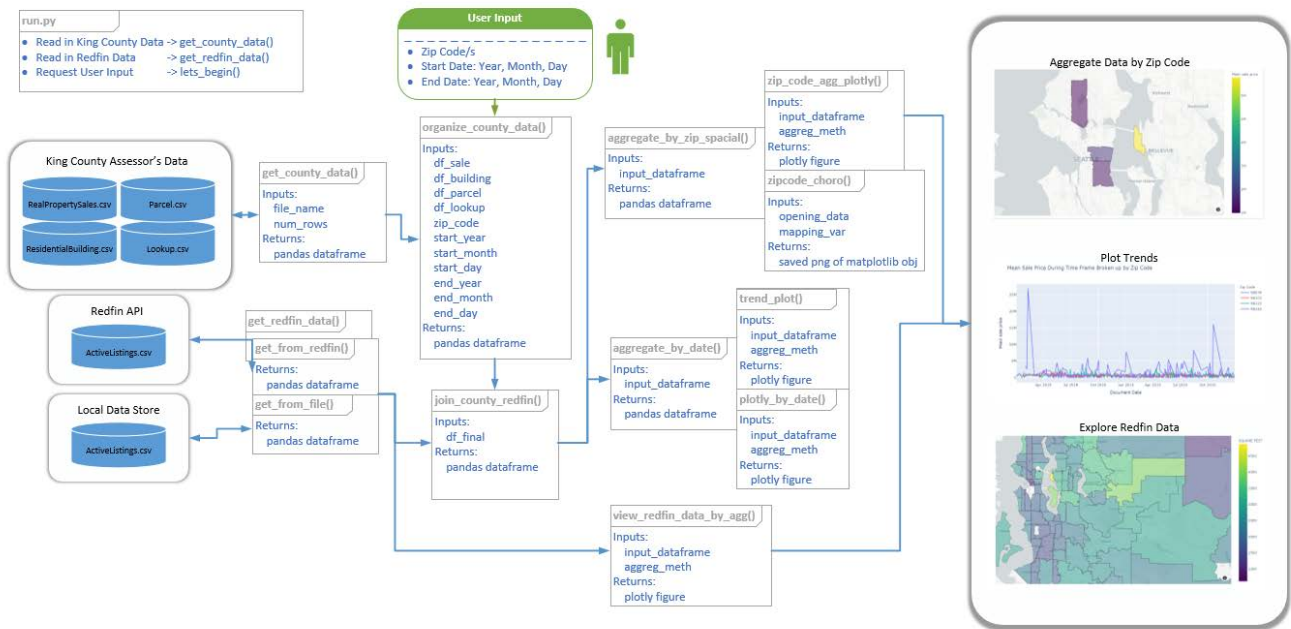# Component Specification

## Functional diagram



## Software components

**Data Collection Functions**
On tool initialization, pulls raw data from the King County Assessor's site and Redfin API/Historical file and performs initial processing

- Start: Begins with tool initialization
- Action: Pulls raw data from remote sources
- Output: Formatted Pandas dataframes

**UI Function**
Interfaces between user and the tool

- Start: Begins after initial data is pulled by the Data Collection Functions
- Action: Queries user for input
- Output: User input stored as variables

**Data Processing Functions**
Processes data based on UI into a format appropriate for visualizations

- Start: Begins once data collection and UI are complete
- Action: Filters and combines separate dataframes into a single frame based on UI
- Output: Formatted Pandas dataframes

**Visualization Function**
Creates graphical figures and other human-readable output

- Start: Once each visualization function is called
- Action: Reads input dataframes and passes to visualization functions
- Output: Graphical figures

# Interactions

- User initiates the tool
- Data Collection Functions begin pulling the data from remote sources
- UI Function queries the user and stores the result
- Data Processing Functions perform processing of the collected data based on UI
- Visualization Function display the results as required