# Airbnb - Lab 5 artifact

Features (user stories) to Implement in Next Sprint:

- **How does the number of reviews of a neighbourhood over a year impact availability?**
  (listings.csv)

  - **Feature 1**: as a user, I want to see how reviews impact availability in a neighbourhood

- **How much do each host earn in total from a year of Airbnb listings?**
  (listings.csv)

  - **Feature 2**: as a user, I want to know how much do hosts earn from Airbnb in a year

- **What is the average earning of hosts in a province?**
  (listings.csv)

  - **Feature 3**: as a user, I want to know how much a host earns, on average, in certain provinces

GUI

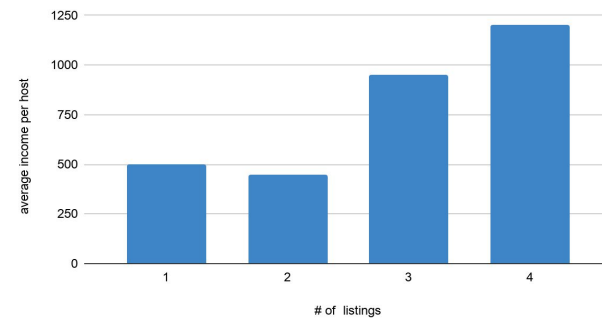- **How does the number of reviews of a neighbourhood over a year impact availability?**

neighbourhood	reviews	availability
A	150	310
B	43	40
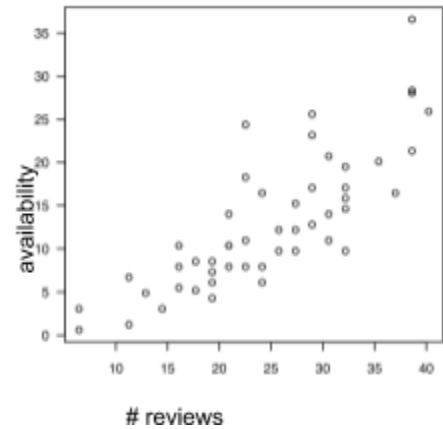
- **How much do each host earn from a year of rent?**

host_id	# of listings	Total earned
8556845	2	$177777
5467535	4	$7456346

- **What is the average earning of hosts in a province?**

Province	Avg earned
A	$17,747
B	$45,345
C	$4,444
D	$45,454
E	$4,324
F	$54,657
G	$57,474
H	$88,765
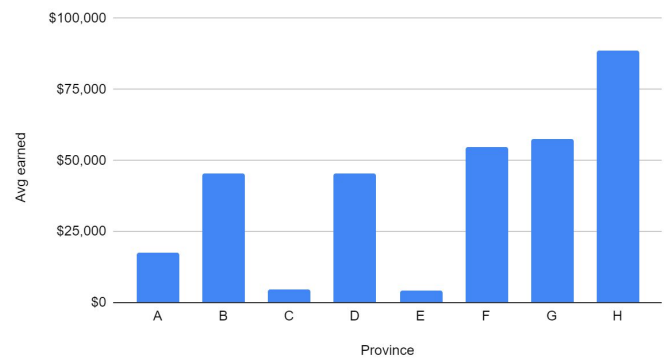
Test Cases

- **Feature 1 test cases**: as a user, I want to see how the number of reviews of a neighbourhood over a year impacts availability

    - Test case 1: as a user, I want to see how reviews impact availability in a neighbourhood

        - Correct output: the page displays a table with the neighbourhoods and their availability and a scatter plot comparing the number of reviews of a neighbourhood and availability

- **Feature 2 test cases**: as a user, I want to know how much do hosts earn from Airbnb in a year

    - Test case 1: as a user, I go onto the chart page and see the analysis for host earnings

        - Correct output: the page displays table with each host, how much they earned in a year, and the amount of listings they had and a graph that shows the average earnings of a host based on the number of listings they had

- **Feature 3 test cases**: as a user, I want to know how much a host earns, on average, in certain provinces

    - Test case 1: as a user, I go onto the chart page and see the analysis for

        - Correct output: the page displays a table and a plot with the neighbourhoods and their average host earnings

TODO LIST

Done list of last sprint:

- Backend program to find number of listings per province.

  - [finished by Qi Liu and verified by everyone]

- Backend program to create a map to collect data of price and data of availability.

  - [finished by Yinjie Xie and verified by everyone]

- Backend program to modify REST API to include a GET request for the number of listings over a province.

  - [finished by Ruth Navarrete and verified by everyone]

- Backend program to modify REST API to include a GET request for the impact of a neighborhood on price and availability and impact of a room type on price and availability.

  - [finished by Yinjie Xie and verified by everyone]

- Create front end components for making a number of listings over a province request.

  - [finished by Jinhuan Liu and verified by everyone]

- Create front end components for making an impact on a neighborhood on price and availability requests.

  - [finished by Jinhuan Liu and verified by everyone]

- Create front end components for making an impact of a room type on price and availability request.

  - [finished by Jinhuan Liu and verified by everyone]

- Frontend program to request data and calculate the average of price and availability.

  - [finished by Vivian Tsai and verified by everyone]

- Testing

  - [finished by Ruth Navarrete and verified by everyone]

ToDo task list for the next sprint:

- Backend program to calculate the number of reviews over a neighbourhood in a year and the availability the neighbourhood had

  - Acceptance criteria: return a JSON array with properties for number of reviews of a neighbourhood and for the availability of a neighbourhood

- Backend program to calculate the total earning per host and the amount of listings a host had

  - Acceptance criteria: return a JSON array with properties for the host id, number of listings a host has, and the total earnings for a host

- Backend program to calculate the average earnings of a host in a province (neighbourhood_group)

  - Acceptance criteria: return a JSON array with properties for the neighbourhood_group, total number of listings in the province, and the average earnings of a host in that province

- Create front end components for displaying neighbourhood reviews and availability analysis

  - Acceptance criteria: the request sends to the server the specified request and displays, in a table and a plot, the server's response

- Create front end components for displaying individual host earning analysis

  - Acceptance criteria: the request sends to the server the specified request and displays, in a table, the server's response. the frontend also performs a function to find the average income of hosts based on the number of listings a host has

- Create front end components for average earnings of hosts in different provinces.

  - Acceptance criteria: the request sends to the server the specified request and displays, in a table and a plot, the server's response

- Backend program to modify REST API to include a GET request for the three features

  - Acceptance criteria: Server receives requests from client and responds with data in JSON

- Testing

  - Acceptance criteria: using Jest, verify that all functions behave properly and output correct results