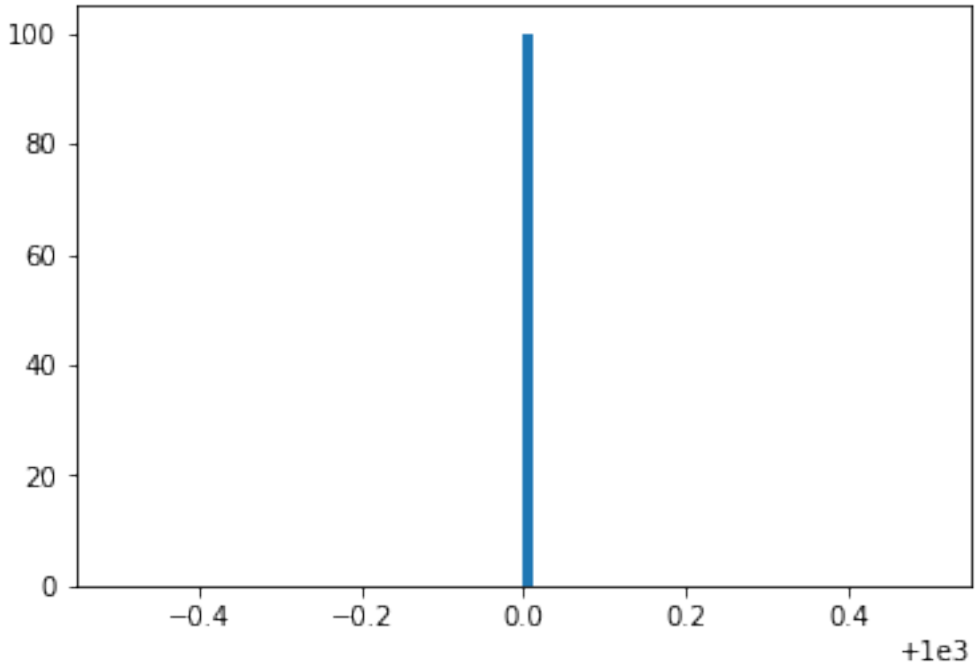
B

February 20, 2020

```
In [21]: import matplotlib.pyplot as plt
         import pandas
         import numpy as np

In [9]: f = open("b_read_on.txt", "r")

In [10]: b, l, d = map(int, f.readline().split())

In [11]: book_scores = map(int, f.readline().split())

In [12]: lib_books_count = []
         lib_days_signup = []
         lib_speed = []

In [13]: book_count_in_libs = dict()

In [14]: for i in range(l):
             n, t, m = map(int, f.readline().split())
             lib_books_count.append(n)
             lib_days_signup.append(t)
             lib_speed.append(m)

             books = map(int, f.readline().split())
             for book in books:
                 if book not in book_count_in_libs:
                     book_count_in_libs[book] = 0

                 book_count_in_libs[book] += 1

In [15]: books_counts = book_count_in_libs.values()

In [16]: print("Books", b)
         print("Libraries", l)
         print("Days", d)

('Books', 100000)
('Libraries', 100)
('Days', 1000)
```

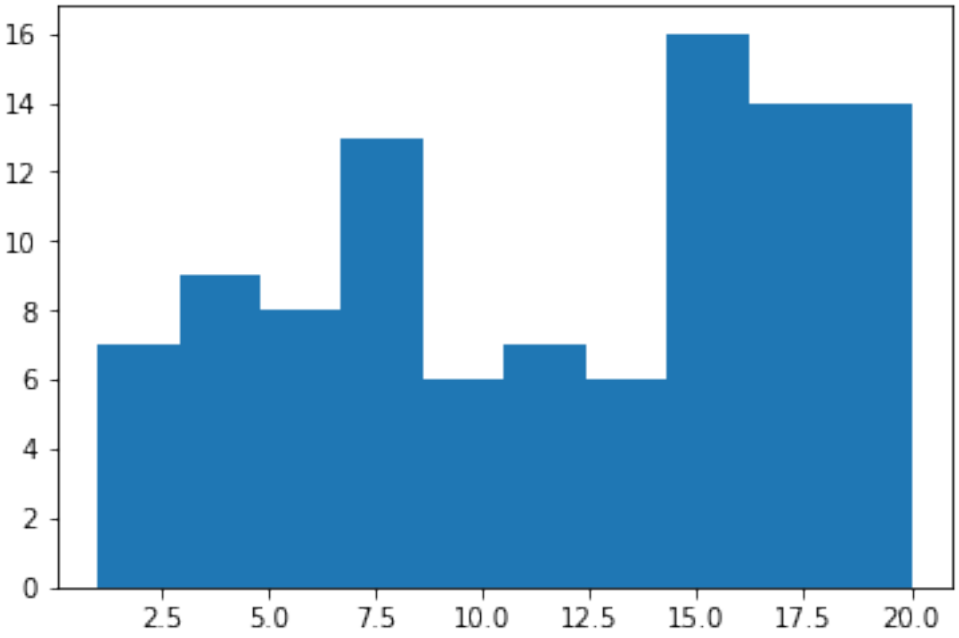
```
In [17]: print("Books per library stats")
         _ = plt.hist(lib_books_count, 100)
```

```
Books per library stats
```



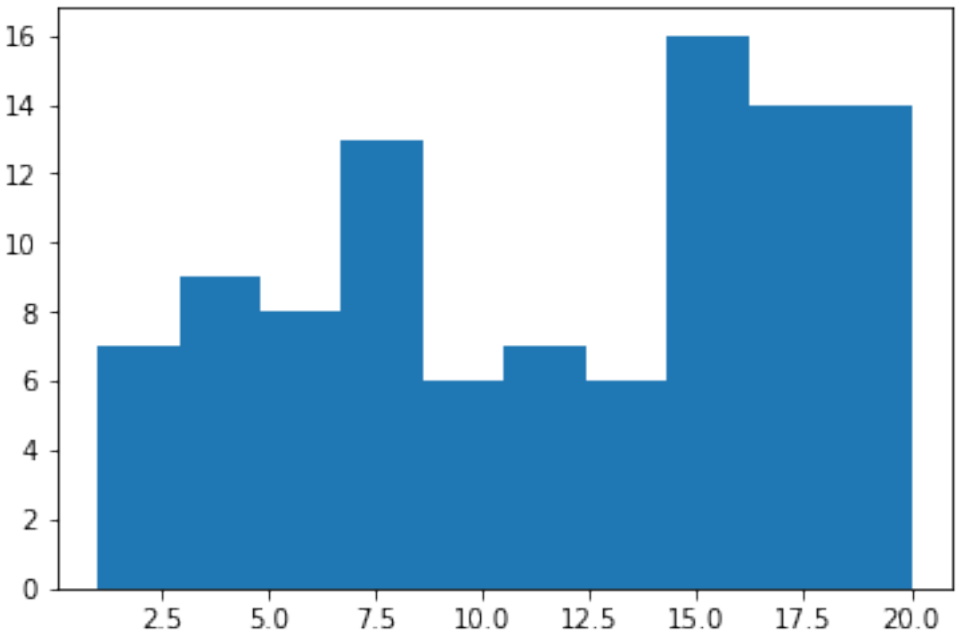

```
In [18]: print("Signup duration stats")
         _ = plt.hist(lib_days_signup, 10)
```

```
Signup duration stats
```



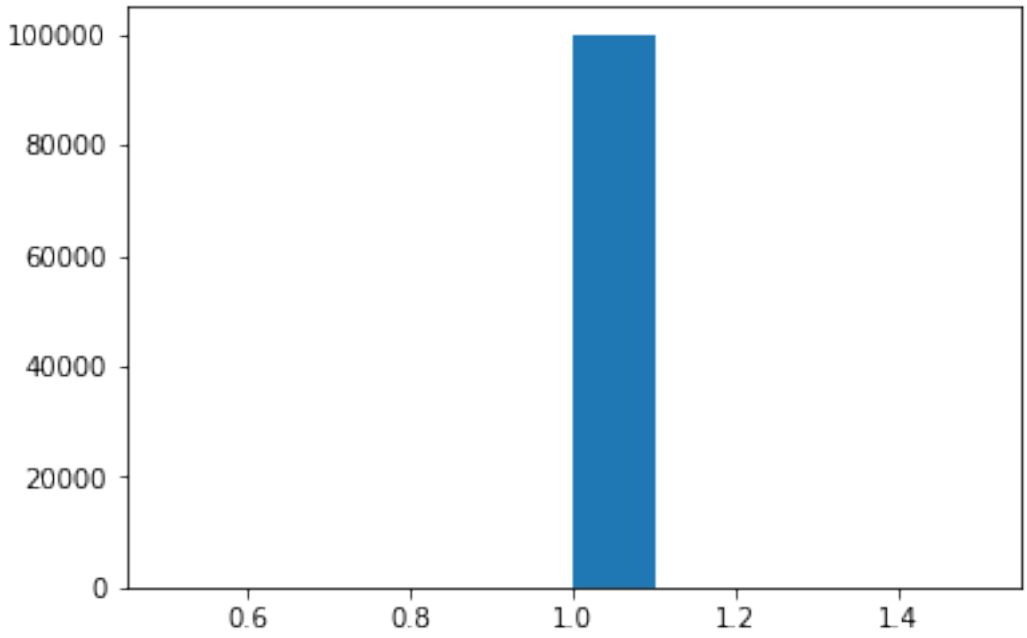

```
In [19]: print("Speed stats")
         _ = plt.hist(lib_days_signup, 10)
```

```
Speed stats
```



In [22]:
```
print("Books per library count stats")
_ = plt.hist(books_counts, 10)
print(np.mean(books_counts), np.min(books_counts), np.max(books_counts), np.std(books_
```

```
Books per library count stats
(1.0, 1, 1, 0.0)
```



In [23]:
```
# books_counts
```

In [ ]: