F

February 20, 2020

In [1]:
```
import matplotlib.pyplot as plt
import pandas
import numpy as np
```

In [2]:
```
f = open("f_libraries_of_the_world.txt", "r")
```

In [3]:
```
b, l, d = map(int, f.readline().split())
```

In [4]:
```
book_scores = map(int, f.readline().split())
```

In [5]:
```
lib_books_count = []
lib_days_signup = []
lib_speed = []
```

In [6]:
```
book_count_in_libs = dict()
```

In [7]:
```
# for bb in range(b):
#     book_count_in_libs[bb] = 0
```

In [8]:
```
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
```

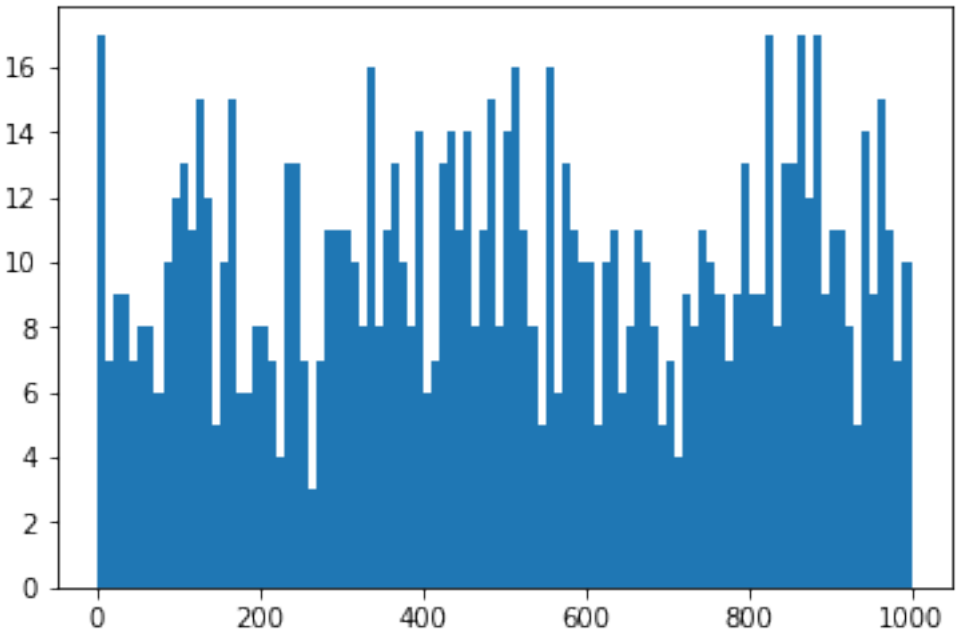
In [9]:
```
books_counts = book_count_in_libs.values()
```

In [10]:
```
print("Books", b)
print("Libraries", l)
print("Days", d)
```

```
('Books', 100000)
('Libraries', 1000)
('Days', 700)
```

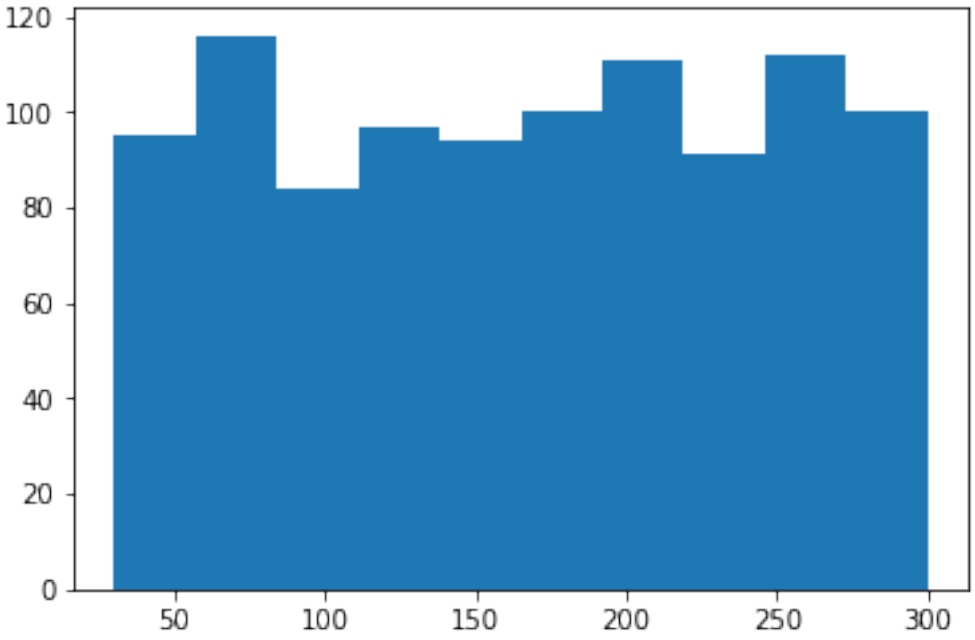
```
In [11]: print("Books per library stats")
         _ = plt.hist(lib_books_count, 100)
```

```
Books per library stats
```



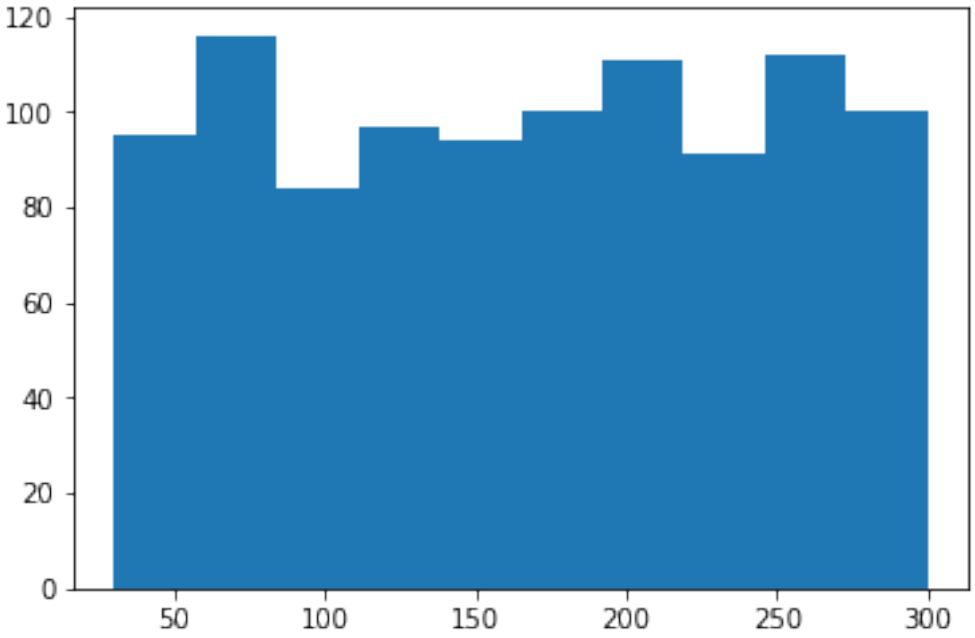

```
In [12]: print("Signup duration stats")
         _ = plt.hist(lib_days_signup, 10)
```

```
Signup duration stats
```



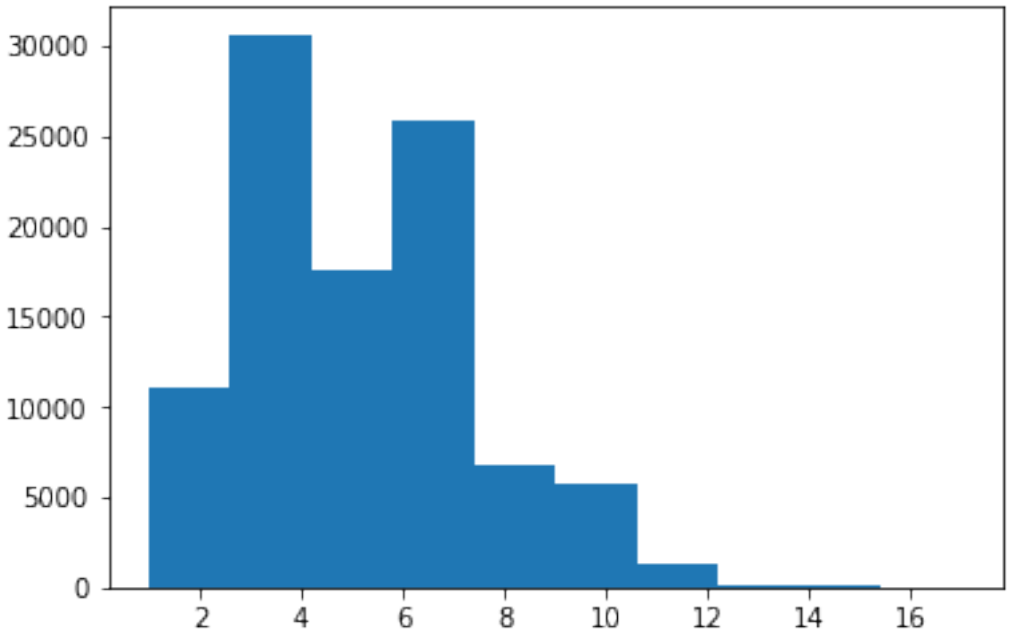

```
In [13]: print("Speed stats")
         _ = plt.hist(lib_days_signup, 10)
```

```
Speed stats
```



In [14]:
```
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
(5.122876540105607, 1, 17, 2.225763646482441)
```



In [ ]:

In [ ]: