1. Use pandas in Python to read the file to a data frame called boxoffice, show the first lines by using head(), output the amount for Star Wars by using iloc or loc. Once you are done, please run the following codes in different cells and observe what they are producing. Please either save the image or take a screen shot and upload it.

```
boxoffice['amount'].plot.bar()
import matplotlib.pyplot as plt
plt.figure(figsize=(15, 3))
plt.bar(boxoffice['title'],boxoffice['amount'])
```

```python
import pandas as pd

boxoffice = pd.read_csv("/content/drive/MyDrive/DATA/boxoffice.csv")
boxoffice.head()
```

	rank	title	title_short	amount	amount_text
0	1	Star Wars: The Last Jedi	Star Wars	71565498	$71
1	2	Jumanji: Welcome to the Jungle	Jumanji	36169328	$36
2	3	Pitch Perfect 3	Pitch Perfect 3	19928525	$19
3	4	The Greatest Showman	Greatest Showman	8805843	$8
4	5	Ferdinand	Ferdinand	7316746	$7

```python
boxoffice.loc[0, ['amount']]
```
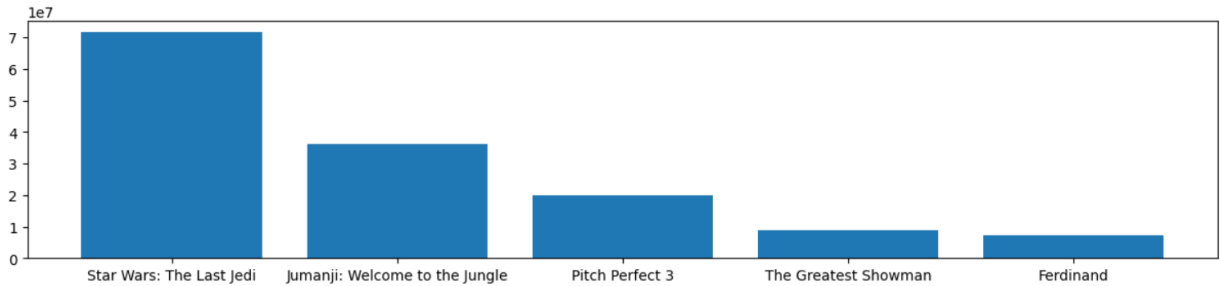
```
                    0

amount   71565498

dtype: object
```
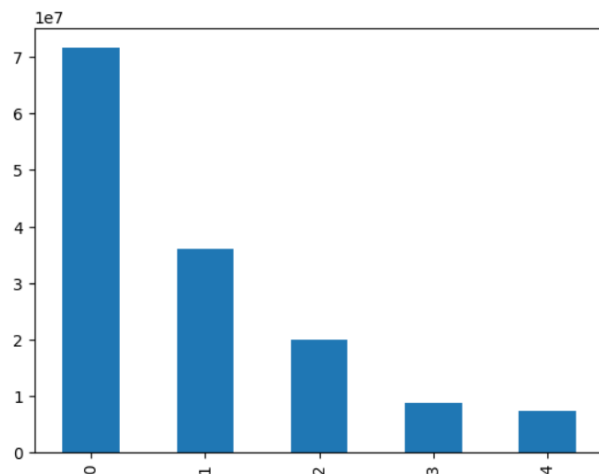
```python
boxoffice['amount'].plot.bar()
```

```
<Axes: >
```

```python
import matplotlib.pyplot as plt
plt.figure(figsize=(15, 3))
plt.bar(boxoffice['title'],boxoffice['amount'])
```

```
<BarContainer object of 5 artists>
```


2. Use read.csv function in R to the file. Then, show the first lines by using head(). Finally, output the amount for Star Wars. You can either use indexes or column name.

```
> df = read.csv("C:/Users/User/OneDrive - Umich/15_CSC302 Intro to Data Visualization/Rscripts/boxoffice.csv", header=T)
> head(df)
  rank                      title    title_short   amount amount_text
1    1       Star Wars: The Last Jedi   Star Wars 71565498         $71
2    2  Jumanji: Welcome to the Jungle     Jumanji 36169328         $36
3    3              Pitch Perfect 3  Pitch Perfect 3 19928525         $19
4    4         The Greatest Showman Greatest Showman  8805843          $8
5    5                    Ferdinand      Ferdinand  7316746          $7

> df[df$title_short == "Star Wars", "amount"]
[1] 71565498
```