Lab 9: Programs on strings read from the CSV files

You are given a CSV file called "Articles.csv" that contains news articles' information in rows, including the article, date, heading, and news type. Write Python programs for the following questions to get the expected outputs as provided.

1) **Problem Statement:** For the given file, write programs to:
   a) Write all the rows which have "CAPE TOWN" in the headings onto a csv file named "Output.csv.
   b) Open the same file in append, append those rows which have date > 2/1/2016.

Output:

	Article	Date	Heading	NewsType
1	Article	Date	Heading	NewsType
2	Cape Town: Ben Stoke	01-03-2016	England d	sports
3	CAPE TOWN: Ben Stok	01-03-2016	Stokes bat	sports
4	CAPE TOWN: Jonny Ba	01-04-2016	Tearful Ba	sports
5	CAPE TOWN: England	01-05-2016	Bavumas r	sports
6	CAPE TOWN: Captain	01-05-2016	Amla lead	sports
7	CAPE TOWN: Captain	01-04-2016	Amla mak	sports
8	London: Pakistan Yasi	16-07-2016	Yasir stars	sports
9	LONDON: Yasir Shah t	16-07-2016	Yasir Shah	sports
10	KARACHI: State Bank (	30-07-2016	State Bank	business
11	LONDON: Pakistan caj	16-07-2016	Misbah ou	sports
12	LONDON: Pakistan Ya:	16-07-2016	Yasir Shah	sports

2) **Problem Statement:** From the "Articles.csv" file, write a Python code to extract the "Date" column for rows 7,8 and 9 and store them in a "Output_Date.txt" file.

Output:

```
≡ Output_Date.txt
1      01-03-2016
2      01-05-2015
3      01-07-2015
```

3) **Problem Statement:** Write a program that reads the data from the file, adds a new column called "Location" and writes it to a new csv file named "With_Locations.csv".
Note - The location can be extracted from the article. The location and article content must be in two separate columns.

For example, given the following row in the CSV file:
KARACHI: Wholesale market rates for sugar dropped.,13-01-2015,sugar prices drop,business
The new row in the new CSV file should be:
KARACHI,Wholesale market rates for sugar dropped.,13-01-2015,sugar prices drop,business

Output:

	Location	Article	Date	Heading	NewsType
1	Location	Article	Date	Heading	NewsType
2	KARACHI	The Sindh	01-01-2015	sindh govt	business
3	HONG KONG	Asian mar	01-02-2015	asia stock	business
4	KARACHI	Strong bul	01-09-2015	bullish kse	business
5	Singapore	Oil fell fur	01-12-2015	oil falls fu	business
6	KARACHI	Wholesale	13-01-2015	sugar pric	business
7	Cape Town	Ben Stoke	01-03-2016	England d	sports
8	HONG KONG	Hong Kon	01-05-2015	hong kong	business
9	New York	Oil prices	01-07-2015	oil hits ne	business
10	CAPE TOWN	Ben Stoke	01-03-2016	Stokes bat	sports
11	SYDNEY	Carlos Bra	01-04-2016	Brathwaite	sports
12	HONG KONG	Asian mar	01-06-2015	asian stoc	business
13	NEW YORK	US oil pric	01-06-2015	us oil pric	business
14	CAPE TOWN	Jonny Bair	01-04-2016	Tearful Ba	sports
15	CAPE TOWN	England g	01-05-2016	Bavumas	sports
16	MUMBAI	Maharash	01-05-2016	Indian sch	sports
17	SYDNEY	Australia	01-05-2016	Australia v	sports
18	London	Pakistan Y	16-07-2016	Yasir stars	sports
19	LONDON	Yasir Shah	16-07-2016	Yasir Shah	sports
20	KARACHI	State Bank	30-07-2016	State Bank	business
21	Karachi	Pakistan s	08-01-2016	Pakistan s	business
22	LONDON	Pakistan c	16-07-2016	Misbah ou	sports
23	LONDON	Pakistan Y	16-07-2016	Yasir Shah	sports
24	Islamabad	Internatio	08-01-2016	Pakistan v	business
25	LAHORE	Pakistan C	01-05-2016	Yasir Shah	sports
26	CAPE TOWN	Captain H	01-05-2016	Amla lead	sports
27	ISLAMABAD	The Jewel	08-01-2016	Pakistan J	business
28	Tokyo	Tokyo sto	08-01-2016	Tokyo sto	business
29	SYDNEY	Australia	01-03-2016	Australias	sports
30	CAPE TOWN	Captain H	01-04-2016	Amla mak	sports

4) Bonus Question

Problem Statement: Write a program to read a csv file and filter out the rows which belong to News Type "sports" and were published between March 2016 and April 2016. Write these rows on to a new csv file named "sports.csv", sorted in ascending order by the published date.

Output:

	Article	Date	Heading	NewsType
1	Article	Date	Heading	NewsType
2	Cape Town: Ben Stol	01-03-2016	England d	sports
3	CAPE TOWN: Ben Stc	01-03-2016	Stokes bat	sports
4	SYDNEY: Australia sp	01-03-2016	Australias	sports
5	SYDNEY: Carlos Bratl	01-04-2016	Brathwait	sports
6	CAPE TOWN: Jonny E	01-04-2016	Tearful Ba	sports
7	CAPE TOWN: Captair	01-04-2016	Amla mak	sports

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