Name - Ojas Denge

Division - G (4) Roll No. - 777

PRN No. - 202201070072

EDS PRACTICAL-4

Code:

```
import pandas as pd
import itertools

# Read the CSV file into a DataFrame
df = pd.read_csv('/content/drive/MyDrive/Colab
Notebooks/Files/grainsales.csv')

# Which was the best month for sales? How much was earned that month?
monthly_sales = df.groupby('Months')['Sales'].sum()

best_month = monthly_sales.idxmax()

best_month_sales = monthly_sales[best_month]

print("Best Month for Sales:", best_month)
print("Sales Amount:", best_month_sales)

# Which product sold the most?
product_sales = df.groupby('GrainName')['Sales'].sum()

best_product = product_sales.idxmax()

best_product_sales = product_sales[best_product]

print("Best Selling Product:", best_product)
print("Sales Amount:", best_product_sales)
```

Output:

Best Month for Sales: JULY Sales Amount: 16000000

Best Selling Product: Wheat

Sales Amount: 16000000

Code:

```
import pandas as pd
import itertools
# Read the CSV file into a DataFrame
df = pd.read csv('/content/drive/MyDrive/Colab
Notebooks/Files/grainsales.csv')
# Example of Pandas operations:
grouped sales = df.groupby('GrainName')['Sales'].sum()
print(grouped sales)
# 2. Filter the DataFrame based on a condition
filtered data = df[df['State'] == 'Maharashtra']
print(filtered data)
sorted data = df.sort values('Sales', ascending=False)
print(sorted data)
monthly sales = df.groupby('Months')['Sales'].sum()
print(monthly sales)
average sales = df.groupby('GrainName')['Sales'].mean()
print(average sales)
grain counts = df['GrainName'].value counts()
print(grain_counts)
# 7. Calculate the total sales for each state and city
state city sales = df.groupby(['State', 'City'])['Sales'].sum()
print(state city sales)
high sales = df[df['Sales'] > 2000000]
print(high sales)
df['Total'] = df.groupby('GrainName')['Sales'].cumsum()
print(df)
```

```
max_sales = df.groupby(['Months', 'Year'])['Sales'].max()
print(max_sales)

# 11. Remove duplicate rows from the DataFrame
df = df.drop_duplicates()
print(df)

# 12. Rename the columns
df = df.rename(columns={'GrainName': 'Grain', 'State': 'StateName',
'City': 'CityName'})
print(df)

# 13. Reset the index of the DataFrame
df = df.reset_index(drop=True)
print(df)

# 14. Export the DataFrame to a CSV file
df.to_csv('output.csv', index=False)
```

Output:

Grai	inName									
Bajı	ra		600000	00						
Brov	vn rice	 e	1400000	00						
Corr	า		1350000	00						
Oats	5		40000	00						
Ragi	Ĺ		500000	00						
Satt	cu		500000	00						
Soo	ji		900000	00						
Whea	at		1600000	00						
Name	e: Sale	es, dt	type: in	nt 64						
	GrainNa	ame	St	tate		City	Months	s Year	Sal	Les
0	Ra	agi N	Maharasl	ntra	Na	gpur	JAI	1 2023	10000	000
2	Ra	agi N	Maharash	ntra	Na	gpur	JAI	1 2023	10000	000
4	Ra	agi N	Maharash	ntra	Na	gpur	JA1	J 2023	10000	000
12	Ra	agi N	Maharash	ntra	Na	gpur	JA1	1 2023	10000	000
24	Ra	agi N	Maharash	ntra	Na	gpur	JAI	1 2023	10000	000
	Grai	inName	9	Sta	ate		City	Months	Year	Sales
19		Corr	1		UP	ŀ	Kanpur	AUG	2023	4500000
23		Corr	า		UP	F	Kanpur	AUG	2023	4500000
11		Corr	ı		UP	F	Kanpur	AUG	2023	4500000
26		Wheat	: West	Beng	gol	Asa	ansole	JULY	2023	4000000
18		Wheat	: West	Beng	gol	Asa	ansole	JULY	2023	4000000
22		Wheat	: West	Beng	gol	Asa	ansole	JULY	2023	4000000
10		Wheat	: West	Beng	gol	Asa	ansole	JULY	2023	4000000
9	Brown	rice	Tel	langa	ana	Hyde	erabad	JUNE	2023	3500000
21	Brown	rice	Tel	langa	ana	Hyde	erabad	JUNE	2023	3500000
25	Brown	rice	Tel	langa	ana	Hyde	erabad	JUNE	2023	3500000
17	Brown	rice	Tel	langa	ana	Hyde	erabad	JUNE		3500000
8		Sooji	I Tam:	il Na	adu	Με	adurai	MAY	2023	3000000

20	Sooji	Tamil Nadu	Madurai	MAY	2023	3000000
16	Sooji	Tamil Nadu	Madurai	MAY	2023	3000000
7	Sattu	Gujarat	Surat	APRIL	2023	2500000
15	Sattu	Gujarat	Surat	APRIL	2023	2500000
6	Oats	Hariyana	Gurugram	MARCH	2023	2000000
14	Oats	Hariyana	Gurugram	MARCH	2023	2000000
13	Bajra	Panjab	Amritsar	FEB	2023	1500000
1	Bajra	Panjab	Amritsar	FEB	2023	1500000
5	Bajra	Panjab	Amritsar	FEB	2023	1500000
3	Bajra	Panjab	Amritsar	FEB	2023	1500000
12	Ragi	Maharashtra	Nagpur	JAN	2023	1000000
4	Ragi	Maharashtra	Nagpur	JAN	2023	1000000
24	Ragi	Maharashtra	Nagpur	JAN	2023	1000000
2	Ragi	Maharashtra	Nagpur	JAN	2023	1000000
0	Ragi	Maharashtra	Nagpur	JAN	2023	1000000

Months

APRIL	5000000
AUG	13500000
FEB	6000000
JAN	5000000
JULY	16000000
JUNE	14000000
MARCH	4000000
MAY	9000000

Name: Sales, dtype: int64

GrainName

Bajra	1500000.0
Brown rice	3500000.0
Corn	4500000.0
Oats	2000000.0
Ragi	1000000.0
Sattu	2500000.0
Sooji	3000000.0
Wheat	4000000.0

Name: Sales, dtype: float64

Ragi 5
Bajra 4
Brown rice 4
Wheat 4
Sooji 3
Corn 3
Oats 2
Sattu 2

Name: GrainName, dtype: int64

City State Gujarat 5000000 4000000 Hariyana Gurugram 5000000 Maharashtra Nagpur Panjab Amritsar 6000000 Tamil Nadu Madurai 9000000 Telangana Hyderabad 14000000 13500000 Kanpur West Bengol Asansole 16000000

Name: Sales, dtype: int64

			: L					
	Grai	inName	St	ate	City	Months	Year	Sales
7	Ş	Sattu	Guja	rat	Surat	APRIL	2023	2500000
8		Sooji	Tamil N	adu	Madurai	MAY	2023	3000000
9 E	rown	rice	Telang	ana	Hyderabad	JUNE	2023	3500000

10	Wheat	West Bengol	Asansole	JULY	2023	4000000	
11	Corn		Kanpur	AUG	2023	4500000	
15	Sattu	Gujarat	Surat	APRIL	2023	2500000	
16	Sooji		Madurai	MAY	2023	3000000	
17	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	
18	Wheat	West Bengol	Asansole	JULY	2023	4000000	
19	Corn	UP	Kanpur	AUG	2023	4500000	
20	Sooji	Tamil Nadu	Madurai	MAY	2023	3000000	
21	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	
22	Wheat	West Bengol	Asansole	JULY	2023	4000000	
23	Corn	UP	Kanpur	AUG	2023	4500000	
25	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	
26	Wheat	West Bengol		JULY	2023	4000000	
	GrainName	State	City	Months	Year	Sales	Total
0	Ragi		Nagpur	JAN	2023	1000000	1000000
1	Bajra	Panjab	Amritsar	FEB	2023	1500000	1500000
2	Ragi		Nagpur		2023	1000000	2000000
3	Bajra	Panjab	Amritsar		2023	1500000	3000000
4	Ragi		Nagpur	JAN	2023	1000000	3000000
5	Bajra		Amritsar	FEB	2023	1500000	4500000
6	Oats	Hariyana	Gurugram		2023	2000000	2000000
7	Sattu		Surat	APRIL	2023	2500000	2500000
8	Sooji		Madurai	MAY	2023	3000000	300000
9	Brown rice	Telangana	Hyderabad		2023	3500000	3500000
10	Wheat		Asansole	JULY	2023	4000000	4000000
11	Corn	UP	Kanpur	AUG	2023	4500000	4500000
12	Ragi		Nagpur	JAN	2023	1000000	4000000
13	Bajra	Panjab	Amritsar	FEB	2023	1500000	6000000
14	Oats		Gurugram		2023	2000000	4000000
15	Sattu	Gujarat	Surat	APRIL	2023	2500000	5000000
16	Sooji		Madurai	MAY	2023	3000000	6000000
17 18	Brown rice	Telangana Wast Bangal	Hyderabad	JUNE	2023	3500000	7000000
19	Wheat	West Bengol UP	Asansole	JULY	2023	4000000	8000000
20	Corn Sooji	Tamil Nadu	Kanpur Madurai	AUG MAY	2023	4500000 3000000	9000000
21	Brown rice	Telangana	Madurar Hyderabad	JUNE	2023	3500000	10500000
22	Wheat	West Bengol	Asansole	JULY	2023	4000000	12000000
23	Corn	West Deligot UP		AUG	2023	4500000	13500000
24	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	5000000
25	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	14000000
26	Wheat	West Bengol	Asansole	JULY	2023	4000000	16000000
Mont		noso bongor	110 0110 0 1 0	0011		100000	
APR:		2500000					
AUG	2023	4500000					
FEB	2023	1500000					
JAN	2023	1000000					
JUL:		4000000					
JUNI		3500000					
MAR	CH 2023	2000000					
MAY	2023	3000000					
Name		ype: int64					
	GrainName	State		Months	Year	Sales	Total
0	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	1000000
1	Bajra	Panjab	Amritsar	FEB	2023	1500000	1500000
2	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	2000000
3	Bajra	Panjab	Amritsar	FEB	2023	1500000	3000000
4	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	300000
5	Bajra	Panjab	Amritsar	FEB	2023	1500000	4500000

6	Oats	Hariyana	Gurugram	MARCH	2023	2000000	2000000
7	Sattu	Gujarat	Surat	APRIL	2023	2500000	2500000
8	Sooji	Tamil Nadu	Madurai	MAY	2023	3000000	3000000
9	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	3500000
10	Wheat	West Bengol	Asansole	JULY	2023	4000000	4000000
$\frac{11}{10}$	Corn	UP	Kanpur	AUG	2023	4500000	4500000
12	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	4000000
13	Bajra	Panjab 	Amritsar	FEB	2023	1500000	6000000
14	Oats	Hariyana	Gurugram	MARCH	2023	2000000	4000000
15 16	Sattu	Gujarat	Surat	APRIL	2023	2500000	5000000
	Sooji	Tamil Nadu	Madurai	MAY	2023	3000000	6000000
17 18	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	7000000
	Wheat	West Bengol	Asansole	JULY	2023	4000000	8000000
19 20	Corn	UP	Kanpur	AUG	2023 2023	4500000	9000000
21	Sooji	Tamil Nadu	Madurai	MAY		3000000	9000000
	Brown rice	Telangana Wast Bargal	Hyderabad	JUNE	2023	3500000	10500000
22 23	Wheat	West Bengol	Asansole	JULY	2023	4000000	12000000
23 24	Corn	UP	Kanpur	AUG	2023	4500000 1000000	13500000 5000000
24 25	Ragi Brown rice	Maharashtra Telangana	Nagpur	JAN	2023	3500000	14000000
25 26			Hyderabad Asansole	JUNE	2023	4000000	
Z 0	Wheat	West Bengol		JULY			16000000 Total
\cap	Grain	StateName	CityName		Year 2023	Sales 1000000	1000000
0	Ragi	Maharashtra	Nagpur Amritsar	JAN	2023	1500000	
2	Bajra	Panjab Mahamash + ma		FEB	2023	1000000	1500000
	Ragi	Maharashtra	Nagpur	JAN	2023	1500000	2000000
3 4	Bajra	Panjab Maharashtra	Amritsar	FEB	2023	1000000	3000000
_	Ragi	Maharashtra	Nagpur	JAN	2023	1500000	3000000 4500000
5	Bajra	Panjab	Amritsar	FEB	2023	2000000	
6	Oats	Hariyana	Gurugram	MARCH		2500000	2000000
8	Sattu Sooji	Gujarat Tamil Nadu	Surat Madurai	APRIL MAY	2023 2023	3000000	2500000
9	Brown rice				2023	3500000	3000000
10	Wheat	Telangana Wast Bangal	Hyderabad Asansole	JUNE	2023	4000000	4000000
$\frac{10}{11}$	Corn	West Bengol UP		JULY AUG	2023	4500000	4500000
12		Maharashtra	Kanpur	JAN	2023	1000000	4000000
13	Ragi Bajra	Manarashtra Panjab	Nagpur Amritsar	FEB	2023	1500000	6000000
$\frac{13}{14}$	Oats	Hariyana	Gurugram	MARCH	2023	2000000	4000000
15	Sattu	Gujarat	Surat	APRIL	2023	2500000	5000000
16	Sooji	Tamil Nadu	Madurai	MAY	2023	3000000	6000000
17	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	7000000
18	Wheat	West Bengol	Asansole	JULY	2023	4000000	8000000
19	Corn	UP	Kanpur	AUG	2023	4500000	9000000
20	Sooji	Tamil Nadu	Madurai	MAY	2023	3000000	9000000
21	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	10500000
22	Wheat	West Bengol	Asansole	JULY	2023	4000000	12000000
23	Corn	UP	Kanpur	AUG	2023	4500000	13500000
24	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	5000000
25	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	14000000
26	Wheat	West Bengol	Asansole	JULY	2023	4000000	16000000
	Grain	StateName	CityName		Year	Sales	Total
0	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	1000000
1	Bajra	Panjab	Amritsar	FEB	2023	1500000	1500000
2	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	2000000
3	Bajra	Panjab	Amritsar	FEB	2023	1500000	3000000
4	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	3000000
5	Bajra	Panjab	Amritsar	FEB	2023	1500000	4500000
6	Oats	Hariyana	Gurugram	MARCH	2023	2000000	2000000
7	Sattu	Gujarat	Surat	APRIL	2023	2500000	2500000

9 Brown rice Telangana Hyderabad JUNE 2023 3500000 3500000 10 Wheat West Bengol Asansole JULY 2023 4000000 4000000 11 Corn UP Kanpur AUG 2023 4500000 4500000 12 Ragi Maharashtra Nagpur JAN 2023 1500000 6000000 13 Bajra Panjab Amritsar FEB 2023 1500000 6000000 14 Oats Hariyana Gurugram MARCH 2023 2500000 4000000 15 Sattu Gujarat Surat APRIL 2023 2500000 5000000 16 Sooji Tamil Nadu Madurai MAY 2023 3500000 6000000 17 Brown rice Telangana Hyderabad JUNE 2023 3500000 9000000 20 Sooji Tamil Nadu Madurai MAY 2023 3500000	8	Sooji	. Tamil Nadu	Madurai	MAY	2023	3000000	3000000
11 Corn UP Kanpur AUG 2023 4500000 4500000 12 Ragi Maharashtra Nagpur JAN 2023 1000000 4000000 13 Bajra Panjab Amritsar FEB 2023 1500000 6000000 14 Oats Hariyana Gurugram MARCH 2023 2500000 4000000 15 Sattu Gujarat Surat APRIL 2023 2500000 5000000 16 Sooji Tamil Nadu Madurai MAY 2023 3500000 6000000 17 Brown rice Telangana Hyderabad JUNE 2023 3500000 7000000 18 Wheat West Bengol Asansole JULY 2023 4500000 9000000 20 Sooji Tamil Nadu Madurai MAY 2023 3500000 9000000 21 Brown rice Telangana Hyderabad JUNE 2023 3500000	9	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	3500000
12 Ragi Maharashtra Nagpur JAN 2023 1000000 4000000 13 Bajra Panjab Amritsar FEB 2023 1500000 6000000 14 Oats Hariyana Gurugram MARCH 2023 2000000 4000000 15 Sattu Gujarat Surat APRIL 2023 2500000 5000000 16 Sooji Tamil Nadu Madurai MAY 2023 3500000 6000000 17 Brown rice Telangana Hyderabad JUNE 2023 3500000 7000000 18 Wheat West Bengol Asansole JULY 2023 4500000 9000000 20 Sooji Tamil Nadu Madurai MAY 2023 3500000 9000000 21 Brown rice Telangana Hyderabad JUNE 2023 3500000 12000000 23 Corn UP Kanpur AUG 2023	10	Wheat	West Bengol	Asansole	JULY	2023	4000000	4000000
13 Bajra Panjab Amritsar FEB 2023 1500000 6000000 14 Oats Hariyana Gurugram MARCH 2023 2000000 4000000 15 Sattu Gujarat Surat APRIL 2023 2500000 5000000 16 Sooji Tamil Nadu Madurai MAY 2023 3000000 6000000 17 Brown rice Telangana Hyderabad JULY 2023 3500000 7000000 18 Wheat West Bengol Asansole JULY 2023 4500000 9000000 20 Sooji Tamil Nadu Madurai MAY 2023 3500000 9000000 21 Brown rice Telangana Hyderabad JUNE 2023 3500000 10500000 23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 3500000 <td>11</td> <td>Corn</td> <td>UP</td> <td>Kanpur</td> <td>AUG</td> <td>2023</td> <td>4500000</td> <td>4500000</td>	11	Corn	UP	Kanpur	AUG	2023	4500000	4500000
14 Oats Hariyana Gurugram MARCH 2023 2000000 4000000 15 Sattu Gujarat Surat APRIL 2023 2500000 5000000 16 Sooji Tamil Nadu Madurai MAY 2023 3000000 6000000 17 Brown rice Telangana Hyderabad JUNE 2023 3500000 7000000 18 Wheat West Bengol Asansole JULY 2023 4000000 8000000 19 Corn UP Kanpur AUG 2023 4500000 9000000 20 Sooji Tamil Nadu Madurai MAY 2023 3000000 9000000 21 Brown rice Telangana Hyderabad JUNE 2023 3500000 10500000 23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 3500000	12	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	4000000
15 Sattu Gujarat Surat APRIL 2023 2500000 5000000 16 Sooji Tamil Nadu Madurai MAY 2023 3000000 6000000 17 Brown rice Telangana Hyderabad JUNE 2023 3500000 7000000 18 Wheat West Bengol Asansole JULY 2023 4500000 8000000 19 Corn UP Kanpur AUG 2023 4500000 9000000 20 Sooji Tamil Nadu Madurai MAY 2023 3000000 9000000 21 Brown rice Telangana Hyderabad JUNE 2023 3500000 10500000 23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 3500000 14000000 25 Brown rice Telangana Hyderabad JUNE 2023 3500000 </td <td>13</td> <td>Bajra</td> <td>Panjab</td> <td>Amritsar</td> <td>FEB</td> <td>2023</td> <td>1500000</td> <td>6000000</td>	13	Bajra	Panjab	Amritsar	FEB	2023	1500000	6000000
16 Sooji Tamil Nadu Madurai MAY 2023 3000000 6000000 17 Brown rice Telangana Hyderabad JUNE 2023 3500000 7000000 18 Wheat West Bengol Asansole JULY 2023 4000000 8000000 19 Corn UP Kanpur AUG 2023 4500000 9000000 20 Sooji Tamil Nadu Madurai MAY 2023 3000000 9000000 21 Brown rice Telangana Hyderabad JUNE 2023 3500000 10500000 22 Wheat West Bengol Asansole JULY 2023 4500000 12000000 23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 3500000 14000000 25 Brown rice Telangana Hyderabad JUNE 2023 35	14	Oats	Hariyana	Gurugram	MARCH	2023	2000000	4000000
17 Brown rice Telangana Hyderabad JUNE 2023 3500000 7000000 18 Wheat West Bengol Asansole JULY 2023 4000000 8000000 19 Corn UP Kanpur AUG 2023 4500000 9000000 20 Sooji Tamil Nadu Madurai MAY 2023 3000000 9000000 21 Brown rice Telangana Hyderabad JUNE 2023 3500000 10500000 22 Wheat West Bengol Asansole JULY 2023 4500000 12000000 23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 3500000 14000000 25 Brown rice Telangana Hyderabad JUNE 2023 3500000 14000000	15	Sattu	Gujarat	Surat	APRIL	2023	2500000	5000000
18 Wheat West Bengol Asansole JULY 2023 4000000 8000000 19 Corn UP Kanpur AUG 2023 4500000 9000000 20 Sooji Tamil Nadu Madurai MAY 2023 3000000 9000000 21 Brown rice Telangana Hyderabad JUNE 2023 3500000 10500000 22 Wheat West Bengol Asansole JULY 2023 4000000 12000000 23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 3500000 14000000 25 Brown rice Telangana Hyderabad JUNE 2023 3500000 14000000	16	Sooji	Tamil Nadu	Madurai	MAY	2023	3000000	6000000
19 Corn UP Kanpur AUG 2023 4500000 9000000 20 Sooji Tamil Nadu Madurai MAY 2023 3000000 9000000 21 Brown rice Telangana Hyderabad JUNE 2023 3500000 10500000 22 Wheat West Bengol Asansole JULY 2023 4000000 12000000 23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 3500000 5000000 25 Brown rice Telangana Hyderabad JUNE 2023 3500000 14000000	17	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	7000000
20 Sooji Tamil Nadu Madurai MAY 2023 3000000 9000000 21 Brown rice Telangana Hyderabad JUNE 2023 3500000 10500000 22 Wheat West Bengol Asansole JULY 2023 4000000 12000000 23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 3500000 5000000 25 Brown rice Telangana Hyderabad JUNE 2023 3500000 14000000	18	Wheat	West Bengol	Asansole	JULY	2023	4000000	8000000
21 Brown rice Telangana Hyderabad JUNE 2023 3500000 10500000 22 Wheat West Bengol Asansole JULY 2023 4000000 12000000 23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 1000000 5000000 25 Brown rice Telangana Hyderabad JUNE 2023 3500000 14000000	19	Corr	UP	Kanpur	AUG	2023	4500000	9000000
22 Wheat West Bengol Asansole JULY 2023 4000000 12000000 23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 1000000 5000000 25 Brown rice Telangana Hyderabad JUNE 2023 3500000 14000000	20	Sooji	Tamil Nadu	Madurai	MAY	2023	3000000	9000000
23 Corn UP Kanpur AUG 2023 4500000 13500000 24 Ragi Maharashtra Nagpur JAN 2023 1000000 5000000 25 Brown rice Telangana Hyderabad JUNE 2023 3500000 14000000	21	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	10500000
24 Ragi Maharashtra Nagpur JAN 2023 1000000 5000000 25 Brown rice Telangana Hyderabad JUNE 2023 3500000 14000000	22	Wheat	West Bengol	Asansole	JULY	2023	4000000	12000000
25 Brown rice Telangana Hyderabad JUNE 2023 3500000 14000000	23	Corn	UP	Kanpur	AUG	2023	4500000	13500000
	24	Ragi	Maharashtra	Nagpur	JAN	2023	1000000	5000000
26 Wheat West Bengol Asansole JULY 2023 4000000 16000000	25_	Brown rice	Telangana	Hyderabad	JUNE	2023	3500000	14000000
	26	Wheat	West Bengol	Asansole	JULY	2023	4000000	16000000

Google Colab Link: https://colab.research.google.com/drive/1rZetINUegCObbBIM3zcBBY-65tQh9HjU?usp=sharing