

```
In [64]: import pandas as pd
import datetime
import numpy as np
```

```
In [65]: df1 = pd.read_json("Entered.json")
```

```
In [66]: df1
```

Out[66]:

	STATUS	orderID	timestamp
0	ENTERED	004e00f9-f2f6-406c-a09f-c3e81d506851	2021-02-14 23:22:11+00:00
1	ENTERED	008f9300-45d7-412a-a76f-6b0af79dc21b	2021-02-15 04:14:24+00:00
2	ENTERED	01209b54-d80e-48bc-871e-9bf29f590a72	2021-02-14 20:17:18+00:00
3	ENTERED	036576f2-a8f4-4c42-b346-8d251ac22a1c	2021-02-14 19:29:55+00:00
4	ENTERED	039641e0-66c3-4298-879f-cfe93e6f2c75	2021-02-14 20:58:16+00:00
...	...	...	...
397	ENTERED	fe918e47-2fac-48c1-8cf2-07eda0b4a3db	2021-02-14 19:06:10+00:00
398	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-14 23:57:43+00:00
399	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:02:05+00:00
400	ENTERED	ffbc3ed4-1063-494c-bf2b-7025451afc9b	2021-02-15 04:22:50+00:00
401	ENTERED	ffdb4e2a-52ce-4c6f-81ce-5ed9e6d4d7b8	2021-02-15 04:27:55+00:00

402 rows × 3 columns

```
In [67]: df1.rename(columns = {'timestamp':'Entered_date_time'}, inplace = True)
```

In [68]: df1

Out[68]:

	STATUS	orderID	Entered_date_time
0	ENTERED	004e00f9-f2f6-406c-a09f-c3e81d506851	2021-02-14 23:22:11+00:00
1	ENTERED	008f9300-45d7-412a-a76f-6b0af79dc21b	2021-02-15 04:14:24+00:00
2	ENTERED	01209b54-d80e-48bc-871e-9bf29f590a72	2021-02-14 20:17:18+00:00
3	ENTERED	036576f2-a8f4-4c42-b346-8d251ac22a1c	2021-02-14 19:29:55+00:00
4	ENTERED	039641e0-66c3-4298-879f-cfe93e6f2c75	2021-02-14 20:58:16+00:00
...	...	...	...
397	ENTERED	fe918e47-2fac-48c1-8cf2-07eda0b4a3db	2021-02-14 19:06:10+00:00
398	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-14 23:57:43+00:00
399	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:02:05+00:00
400	ENTERED	ffbc3ed4-1063-494c-bf2b-7025451afc9b	2021-02-15 04:22:50+00:00
401	ENTERED	ffdb4e2a-52ce-4c6f-81ce-5ed9e6d4d7b8	2021-02-15 04:27:55+00:00

402 rows × 3 columns

In [69]: df2 = pd.read\_json("Init.json")

In [70]: df2

Out[70]:

	STATUS	orderID	timestamp
0	INIT	004e00f9-f2f6-406c-a09f-c3e81d506851	2021-02-14 23:17:47+00:00
1	INIT	008f9300-45d7-412a-a76f-6b0af79dc21b	2021-02-15 04:14:10+00:00
2	INIT	01209b54-d80e-48bc-871e-9bf29f590a72	2021-02-14 20:16:51+00:00
3	INIT	036576f2-a8f4-4c42-b346-8d251ac22a1c	2021-02-14 19:27:51+00:00
4	INIT	039641e0-66c3-4298-879f-cfe93e6f2c75	2021-02-14 20:59:27+00:00
...	...	...	...
398	INIT	fe918e47-2fac-48c1-8cf2-07eda0b4a3db	2021-02-14 19:05:37+00:00
399	INIT	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-14 23:57:26+00:00
400	INIT	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:01:31+00:00
401	INIT	ffbc3ed4-1063-494c-bf2b-7025451afc9b	2021-02-15 04:22:13+00:00
402	INIT	ffdb4e2a-52ce-4c6f-81ce-5ed9e6d4d7b8	2021-02-15 04:26:16+00:00

403 rows × 3 columns

In [71]: df2.rename(columns = {'timestamp':'INIT\_date\_time'}, inplace = True)

```
In [72]: df2
```

Out[72]:

	STATUS	orderID	INIT_date_time
0	INIT	004e00f9-f2f6-406c-a09f-c3e81d506851	2021-02-14 23:17:47+00:00
1	INIT	008f9300-45d7-412a-a76f-6b0af79dc21b	2021-02-15 04:14:10+00:00
2	INIT	01209b54-d80e-48bc-871e-9bf29f590a72	2021-02-14 20:16:51+00:00
3	INIT	036576f2-a8f4-4c42-b346-8d251ac22a1c	2021-02-14 19:27:51+00:00
4	INIT	039641e0-66c3-4298-879f-cfe93e6f2c75	2021-02-14 20:59:27+00:00
...	...	...	...
398	INIT	fe918e47-2fac-48c1-8cf2-07eda0b4a3db	2021-02-14 19:05:37+00:00
399	INIT	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-14 23:57:26+00:00
400	INIT	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:01:31+00:00
401	INIT	ffbc3ed4-1063-494c-bf2b-7025451afc9b	2021-02-15 04:22:13+00:00
402	INIT	ffdb4e2a-52ce-4c6f-81ce-5ed9e6d4d7b8	2021-02-15 04:26:16+00:00

403 rows × 3 columns

```
In [73]: df = pd.merge(df1, df2, on=["orderID"])
```

```
In [74]: df
```

Out[74]:

	STATUS_x	orderID	Entered_date_time	STATUS_y	INIT_date_time
0	ENTERED	004e00f9-f2f6-406c-a09f-c3e81d506851	2021-02-14 23:22:11+00:00	INIT	2021-02-14 23:17:47+00:00
1	ENTERED	008f9300-45d7-412a-a76f-6b0af79dc21b	2021-02-15 04:14:24+00:00	INIT	2021-02-15 04:14:10+00:00
2	ENTERED	01209b54-d80e-48bc-871e-9bf29f590a72	2021-02-14 20:17:18+00:00	INIT	2021-02-14 20:16:51+00:00
3	ENTERED	036576f2-a8f4-4c42-b346-8d251ac22a1c	2021-02-14 19:29:55+00:00	INIT	2021-02-14 19:27:51+00:00
4	ENTERED	039641e0-66c3-4298-879f-cfe93e6f2c75	2021-02-14 20:58:16+00:00	INIT	2021-02-14 20:59:27+00:00
...	...	...	...	...	...
424	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-14 23:57:43+00:00	INIT	2021-02-15 00:01:31+00:00
425	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:02:05+00:00	INIT	2021-02-14 23:57:26+00:00
426	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:02:05+00:00	INIT	2021-02-15 00:01:31+00:00
427	ENTERED	ffbc3ed4-1063-494c-bf2b-7025451afc9b	2021-02-15 04:22:50+00:00	INIT	2021-02-15 04:22:13+00:00
428	ENTERED	ffdb4e2a-52ce-4c6f-81ce-5ed9e6d4d7b8	2021-02-15 04:27:55+00:00	INIT	2021-02-15 04:26:16+00:00

429 rows × 5 columns

```
In [75]: df['time_diff'] = df['Entered_date_time'] - df['INIT_date_time']
```

In [76]: df

Out[76]:

	STATUS_x	orderID	Entered_date_time	STATUS_y	INIT_date_time	time_diff
0	ENTERED	004e00f9-f2f6-406c-a09f-c3e81d506851	2021-02-14 23:22:11+00:00	INIT	2021-02-14 23:17:47+00:00	00:04:24
1	ENTERED	008f9300-45d7-412a-a76f-6b0af79dc21b	2021-02-15 04:14:24+00:00	INIT	2021-02-15 04:14:10+00:00	00:00:14
2	ENTERED	01209b54-d80e-48bc-871e-9bf29f590a72	2021-02-14 20:17:18+00:00	INIT	2021-02-14 20:16:51+00:00	00:00:27
3	ENTERED	036576f2-a8f4-4c42-b346-8d251ac22a1c	2021-02-14 19:29:55+00:00	INIT	2021-02-14 19:27:51+00:00	00:02:04
4	ENTERED	039641e0-66c3-4298-879f-cfe93e6f2c75	2021-02-14 20:58:16+00:00	INIT	2021-02-14 20:59:27+00:00	-1 days +23:58:49
...	...	...	...	...	...	...
424	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-14 23:57:43+00:00	INIT	2021-02-15 00:01:31+00:00	-1 days +23:56:12
425	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:02:05+00:00	INIT	2021-02-14 23:57:26+00:00	00:04:39
426	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:02:05+00:00	INIT	2021-02-15 00:01:31+00:00	00:00:34
427	ENTERED	ffbc3ed4-1063-494c-bf2b-7025451afc9b	2021-02-15 04:22:50+00:00	INIT	2021-02-15 04:22:13+00:00	00:00:37
428	ENTERED	ffdb4e2a-52ce-4c6f-81ce-5ed9e6d4d7b8	2021-02-15 04:27:55+00:00	INIT	2021-02-15 04:26:16+00:00	00:01:39

429 rows × 6 columns

```
In [77]: def my_func(x):
         y = str(x).split(":")
         _min = y[1]
         _sec = y[2].split("+")[0]
         return f' {_min}:{_sec}'
df['Order_time_in_Second'] = df['time_diff'].apply(my_func)
```

In [78]: df

Out[78]:

	STATUS_x	orderID	Entered_date_time	STATUS_y	INIT_date_time	time_diff	Order_time_in_Second
0	ENTERED	004e00f9-f2f6-406c-a09f-c3e81d506851	2021-02-14 23:22:11+00:00	INIT	2021-02-14 23:17:47+00:00	00:04:24	04:24
1	ENTERED	008f9300-45d7-412a-a76f-6b0af79dc21b	2021-02-15 04:14:24+00:00	INIT	2021-02-15 04:14:10+00:00	00:00:14	00:14
2	ENTERED	01209b54-d80e-48bc-871e-9bf29f590a72	2021-02-14 20:17:18+00:00	INIT	2021-02-14 20:16:51+00:00	00:00:27	00:27
3	ENTERED	036576f2-a8f4-4c42-b346-8d251ac22a1c	2021-02-14 19:29:55+00:00	INIT	2021-02-14 19:27:51+00:00	00:02:04	02:04
4	ENTERED	039641e0-66c3-4298-879f-cfe93e6f2c75	2021-02-14 20:58:16+00:00	INIT	2021-02-14 20:59:27+00:00	-1 days +23:58:49	58:49
...	...	...	...	...	...	...	...
424	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-14 23:57:43+00:00	INIT	2021-02-15 00:01:31+00:00	-1 days +23:56:12	56:12
425	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:02:05+00:00	INIT	2021-02-14 23:57:26+00:00	00:04:39	04:39
426	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:02:05+00:00	INIT	2021-02-15 00:01:31+00:00	00:00:34	00:34
427	ENTERED	ffbc3ed4-1063-494c-bf2b-7025451afc9b	2021-02-15 04:22:50+00:00	INIT	2021-02-15 04:22:13+00:00	00:00:37	00:37
428	ENTERED	ffdb4e2a-52ce-4c6f-81ce-5ed9e6d4d7b8	2021-02-15 04:27:55+00:00	INIT	2021-02-15 04:26:16+00:00	00:01:39	01:39

429 rows × 7 columns

```
In [79]: df.drop(['time_diff'], axis=1)
```

Out[79]:

	STATUS_x	orderID	Entered_date_time	STATUS_y	INIT_date_time	Order_time_in_Second
0	ENTERED	004e00f9-f2f6-406c-a09f-c3e81d506851	2021-02-14 23:22:11+00:00	INIT	2021-02-14 23:17:47+00:00	04:24
1	ENTERED	008f9300-45d7-412a-a76f-6b0af79dc21b	2021-02-15 04:14:24+00:00	INIT	2021-02-15 04:14:10+00:00	00:14
2	ENTERED	01209b54-d80e-48bc-871e-9bf29f590a72	2021-02-14 20:17:18+00:00	INIT	2021-02-14 20:16:51+00:00	00:27
3	ENTERED	036576f2-a8f4-4c42-b346-8d251ac22a1c	2021-02-14 19:29:55+00:00	INIT	2021-02-14 19:27:51+00:00	02:04
4	ENTERED	039641e0-66c3-4298-879f-cfe93e6f2c75	2021-02-14 20:58:16+00:00	INIT	2021-02-14 20:59:27+00:00	58:49
...	...	...	...	...	...	...
424	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-14 23:57:43+00:00	INIT	2021-02-15 00:01:31+00:00	56:12
425	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:02:05+00:00	INIT	2021-02-14 23:57:26+00:00	04:39
426	ENTERED	fef11248-4db7-4e93-835a-33fda2b32d25	2021-02-15 00:02:05+00:00	INIT	2021-02-15 00:01:31+00:00	00:34
427	ENTERED	ffbc3ed4-1063-494c-bf2b-7025451afc9b	2021-02-15 04:22:50+00:00	INIT	2021-02-15 04:22:13+00:00	00:37
428	ENTERED	ffdb4e2a-52ce-4c6f-81ce-5ed9e6d4d7b8	2021-02-15 04:27:55+00:00	INIT	2021-02-15 04:26:16+00:00	01:39

429 rows × 6 columns

```
In [80]: df.to_csv("FC_report.csv")
```

```
In [ ]:
```