

Monitoring and Data Handling System

1. **Collect Data:** The system collects data files every 30 minutes and stores them in folder "A".
2. **Generate 24-Hour File:** The third-party analysis software requires the data for a full 24-hour period in a single file, which should be saved in folder "B".
3. **Merge and Transfer:** The module should:
 - Merge the 48 files from folder "A" in chronological order.
 - Convert the merged data into a single 24-hour file.
 - Transfer the resulting file to folder "B".

```
In [1]: #collection resources
import os
import pandas as pd
from datetime import datetime
```

source

input_dir for collecting and output_dir where we store our data

```
In [2]: input_dir = "C:/Users/Ayush Lokhande/OneDrive/Documents/AA"
output_dir = "C:/Users/Ayush Lokhande/OneDrive/Documents/BB"
```

```
In [3]: # Get a list of all files in the input directory
files = [f for f in os.listdir(input_dir) if os.path.isfile(os.path.join(input_dir, f))]
```

```
In [4]: files.sort(key=lambda x: os.path.getmtime(os.path.join(input_dir, x)))
```

```
In [5]: # Initialize an empty list to store dataframes
dfs = []
```

```
In [6]: # Read and append each file to the list
for file in files:
    df = pd.read_csv(os.path.join(input_dir, file))
    dfs.append(df)
```

merge all dataframes into one

```
In [7]: merged_df = pd.concat(dfs)
```

```
In [8]: # Get the current date and time  
now = datetime.now()
```

genrate file with current date

```
In [9]: # Generate the filename with the current date  
output_file = os.path.join(output_dir, f"merged_{now.strftime('%Y%m%d')}.cs
```

saving our file into folder B

```
In [10]: # Save the merged dataframe to the output directory  
merged_df.to_csv(output_file, index=False)  
  
print(f"Files merged and saved to {output_file}")
```

Files merged and saved to C:/Users/Ayush Lokhande/OneDrive/Documents/BB\merged_20240725.csv

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In [ ]:
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In [ ]:
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