Advanced Tutorial on Implementing PFPMC Algorithm

In this tutorial, we explain how the PFPMC algorithm can be implemented by varying the minimum support values

Step 1: Import the PFPMC algorithm and pandas data frame

In [1]:
```
from PAMI.periodicFrequentPattern.basic import PFPMC  as alg
import pandas as pd
```

Step 2: Specify the following input parameters

In [2]:
```
inputFile = 'temporal_T10I4D100K.csv'
seperator='¥t'
maxmunPeriodCount=5000
minimumSupportCountList = [1000, 1500, 2000, 2500, 3000]
#minimumSupport can also specified between 0 to 1. E.g., minSupList = [0.005, 0.006,

result = pd.DataFrame(columns=['algorithm', 'minSup', 'maxPer','patterns', 'runtime'
#initialize a data frame to store the results of PFPMC algorithm
```

Step 3: Execute the PFPMC algorithm using a for loop

In [3]:
```
algorithm = 'PFPMC'  #specify the algorithm name
for minSupCount in minimumSupportCountList:
    obj = alg.PFPMC(iFile=inputFile, minSup=minSupCount,maxPer=maxmunPeriodCount, se
    obj.startMine()
    #store the results in the data frame
    result.loc[result.shape[0]] = [algorithm, minSupCount,maxmunPeriodCount, len(obj
```

```
Periodic-Frequent patterns were generated successfully using PFPDiffset ECLAT algori
thm
Periodic-Frequent patterns were generated successfully using PFPDiffset ECLAT algori
thm
Periodic-Frequent patterns were generated successfully using PFPDiffset ECLAT algori
thm
Periodic-Frequent patterns were generated successfully using PFPDiffset ECLAT algori
thm
Periodic-Frequent patterns were generated successfully using PFPDiffset ECLAT algori
thm
```

In [4]:
```
print(result)
```

```
  algorithm  minSup  maxPer  patterns      runtime      memory
0     PFPMC    1000    5000       385  1525.650484  1823825920
1     PFPMC    1500    5000       237   635.247543  1204428800
2     PFPMC    2000    5000       155   280.779971   861159424
3     PFPMC    2500    5000       107   144.305813   659865600
4     PFPMC    3000    5000        60    57.411468   463773696
```

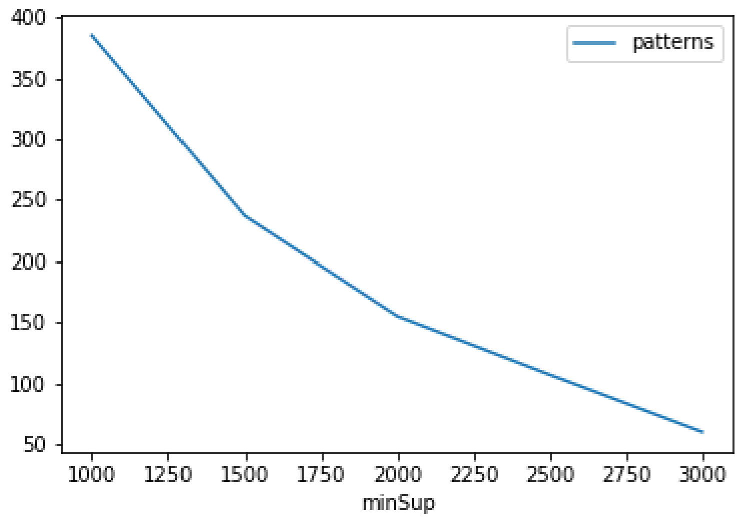
Step 5: Visualizing the results

Step 5.1 Importing the plot library

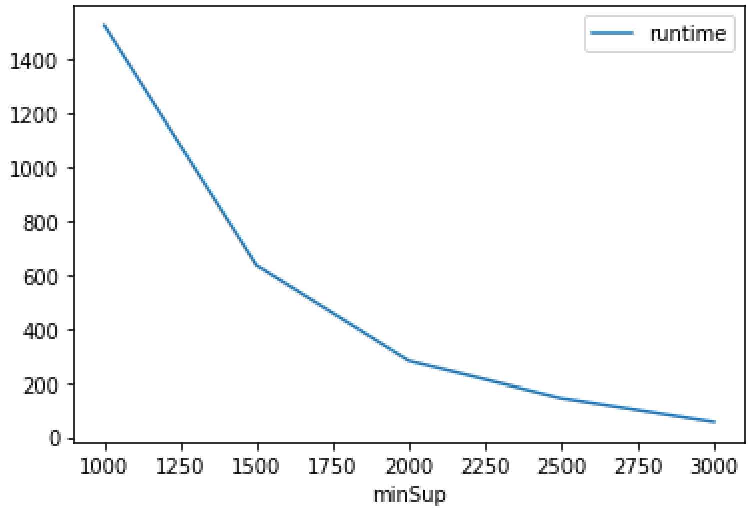
In [5]:
```
from PAMI.extras.graph import plotLineGraphsFromDataFrame as plt
```

Step 5.2. Plotting the number of patterns

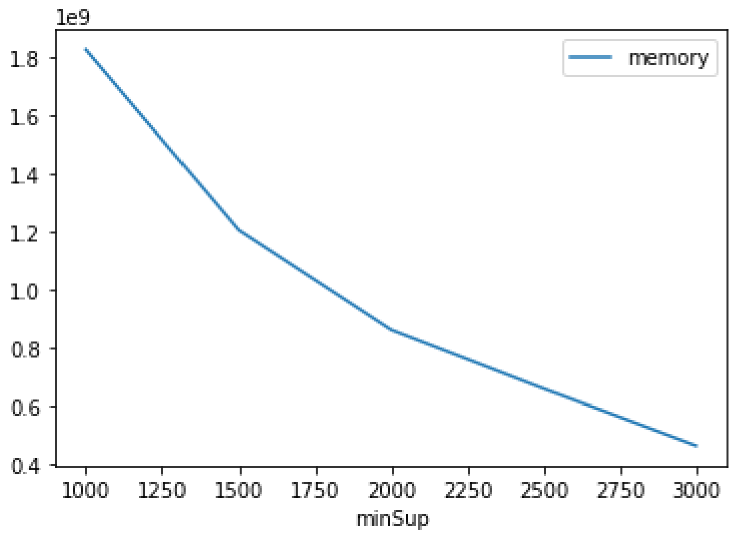
In [6]:
```
ab = plt.plotGraphsFromDataFrame(result)
ab.plotGraphsFromDataFrame() #drawPlots()
```



```
Graph for No Of Patterns is successfully generated!
```



```
Graph for Runtime taken is successfully generated!
```



```
Graph for memory consumption is successfully generated!
```

Step 6: Saving the results as latex files

In [7]:
```
from PAMI.extras.graph import generateLatexFileFromDataFrame as gdf
gdf.generateLatexCode(result)
```

```
Latex files generated successfully
```