Advanced Tutorial on Implementing PPF_DFS Algorithm

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

Step 1: Import the PPF_DFS algorithm and pandas data frame

In [1]:

```
from PAMI.partialPeriodicFrequentPattern.basic import PPF_DFS  as alg
import pandas as pd
```

Step 2: Specify the following input parameters

In [2]:

```
inputFile = 'temporal_T10I4D100K.csv'
seperator='¥t'
maxmunPeriodCount=5000
minimumSupportCountList = [100, 150, 200, 250, 300]
#minimumSupport can also specified between 0 to 1. E.g., minSupList = [0.005, 0.006,
minPRCount=0.5
result = pd.DataFrame(columns=['algorithm', 'minSup', 'maxPer','minPR','patterns', '
#initialize a data frame to store the results of PPF_DFS algorithm
```

Step 3: Execute the PPF_DFS algorithm using a for loop

In [3]:

```
algorithm = 'PPF_DFS'  #specify the algorithm name
for minSupCount in minimumSupportCountList:
    obj = alg.PPF_DFS('temporal_T10I4D100K.csv', minSup=minSupCount,maxPer=maxmunPer
    obj.startMine()
    #store the results in the data frame
    result.loc[result.shape[0]] = [algorithm, minSupCount,maxmunPeriodCount,minPRCou
    print(result)
```

```
  algorithm minSup maxPer minPR patterns    runtime     memory
0   PPF_DFS    100   5000   0.5    27532  43.756669  230125568
  algorithm minSup maxPer minPR patterns    runtime     memory
0   PPF_DFS    100   5000   0.5    27532  43.756669  230125568
1   PPF_DFS    150   5000   0.5    19126  65.101228  240664576
  algorithm minSup maxPer minPR patterns    runtime     memory
0   PPF_DFS    100   5000   0.5    27532  43.756669  230125568
1   PPF_DFS    150   5000   0.5    19126  65.101228  240664576
2   PPF_DFS    200   5000   0.5    13255  89.687466  252223488
  algorithm minSup maxPer minPR patterns     runtime     memory
0   PPF_DFS    100   5000   0.5    27532   43.756669  230125568
1   PPF_DFS    150   5000   0.5    19126   65.101228  240664576
2   PPF_DFS    200   5000   0.5    13255   89.687466  252223488
3   PPF_DFS    250   5000   0.5     7703  118.349614  263426048
  algorithm minSup maxPer minPR patterns     runtime     memory
0   PPF_DFS    100   5000   0.5    27532   43.756669  230125568
1   PPF_DFS    150   5000   0.5    19126   65.101228  240664576
2   PPF_DFS    200   5000   0.5    13255   89.687466  252223488
3   PPF_DFS    250   5000   0.5     7703  118.349614  263426048
4   PPF_DFS    300   5000   0.5     4552  163.803611  275419136
```

Step 5: Visualizing the results

Step 5.1 Importing the plot library

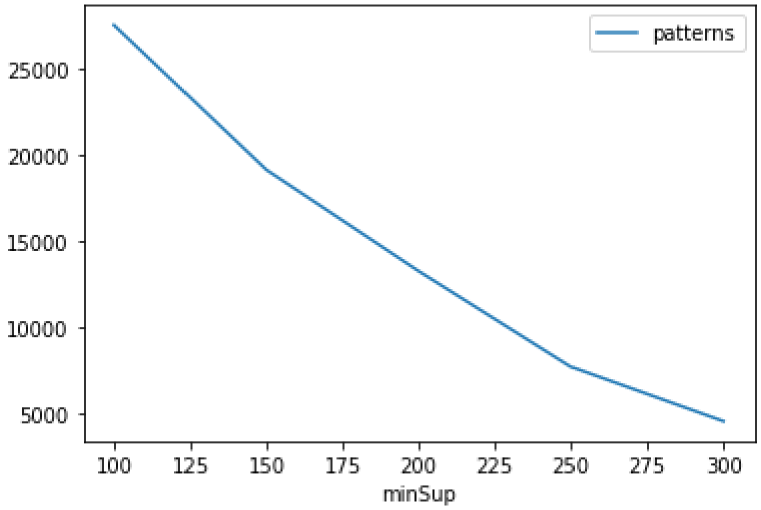
In [4]:

```
from PAMI.extras.graph import plotLineGraphsFromDataFrame as plt
```

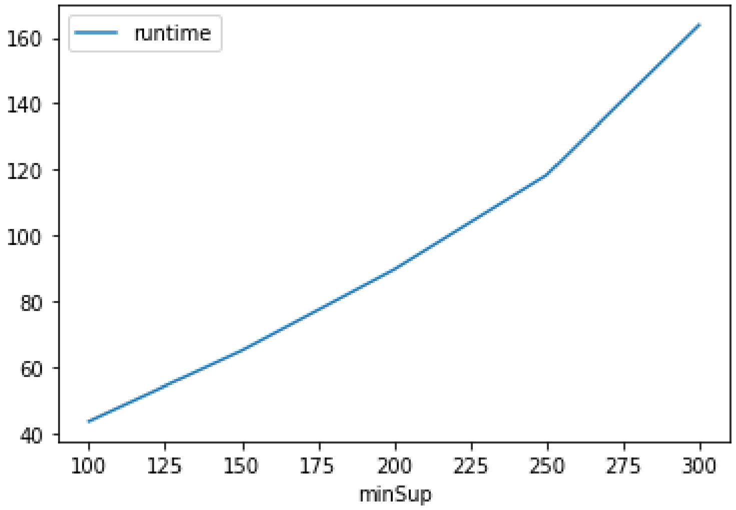
Step 5.2. Plotting the number of patterns

In [5]:

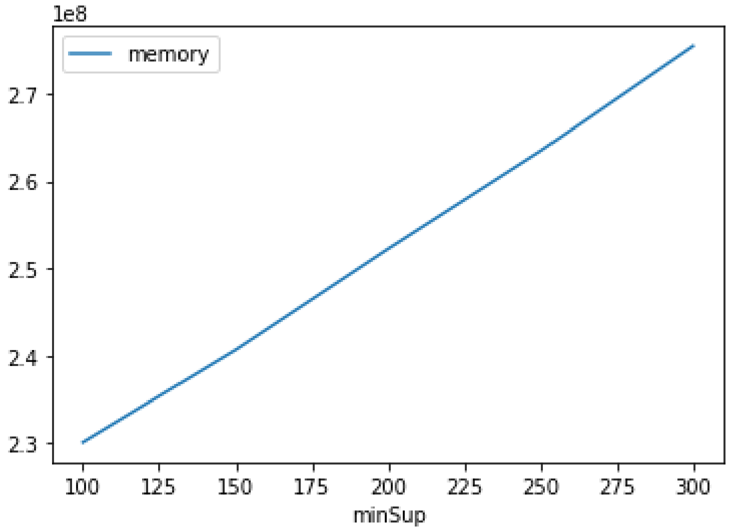
```
ab = plt.plotGraphsFromDataFrame(result)
ab.plotGraphsFromDataFrame() #drawPlots()
```



```
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 [6]:

```
from PAMI.extras.graph import generateLatexFileFromDataFrame as gdf
gdf.generateLatexCode(result)
```

```
Latex files generated successfully
```