Advanced Tutorial on Implementing FFSPMiner Algorithm

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

Step 1: Import the FFSPMiner algorithm and pandas data frame

In [1]:

```
from PAMI.fuzzyFrequentSpatialPattern.basic import FFSPMiner  as alg
import pandas as pd
```

Step 2: Specify the following input parameters

In [2]:

```
inputFile = 'T10_utility.txt'

minimumSupportCountList=[100,150,200,250,300]  #Users can also specify this constrai
seperator=' '
neighborFile='T10_utility_neighbour.txt'
result = pd.DataFrame(columns=['algorithm', 'minSup', 'patterns', 'runtime', 'memory
#initialize a data frame to store the results of FFSPMiner algorithm
```

Step 3: Execute the FFSPMiner algorithm using a for loop

In [3]:

```
algorithm = 'FFSPMiner'  #specify the algorithm name
for minSupCount in minimumSupportCountList:
    obj = alg.FFSPMiner(iFile=inputFile,nFile=neighborFile, minSup=minSupCount, sep=
    obj.startMine()
    #store the results in the data frame
    result.loc[result.shape[0]] = [algorithm, minSupCount, len(obj.getPatterns()), c
```

In [4]:

```
print(result)
```

```
   algorithm  minSup  patterns   runtime     memory
0  FFSPMiner     100       797  7.506250  458518528
1  FFSPMiner     150       765  7.187267  458665984
2  FFSPMiner     200       740  6.880144  458027008
3  FFSPMiner     250       717  7.313266  457330688
4  FFSPMiner     300       690  7.239387  455999488
```

Step 5: Visualizing the results

Step 5.1 Importing the plot library

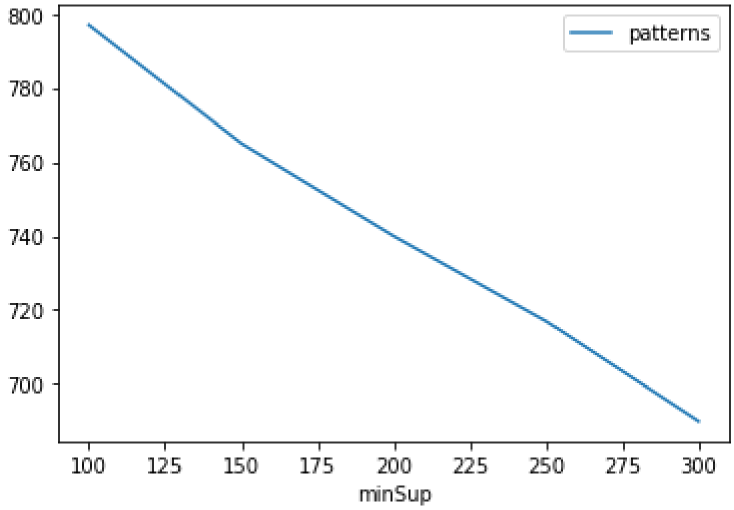
In [5]:

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

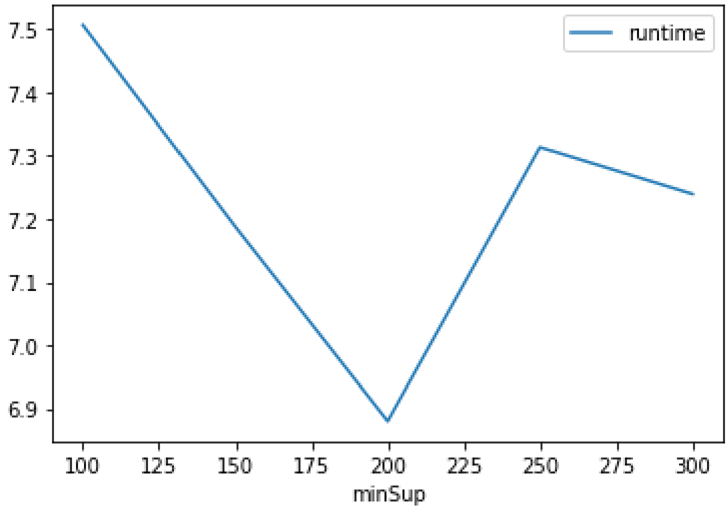
Step 5.2. Plotting the number of patterns

In [6]:

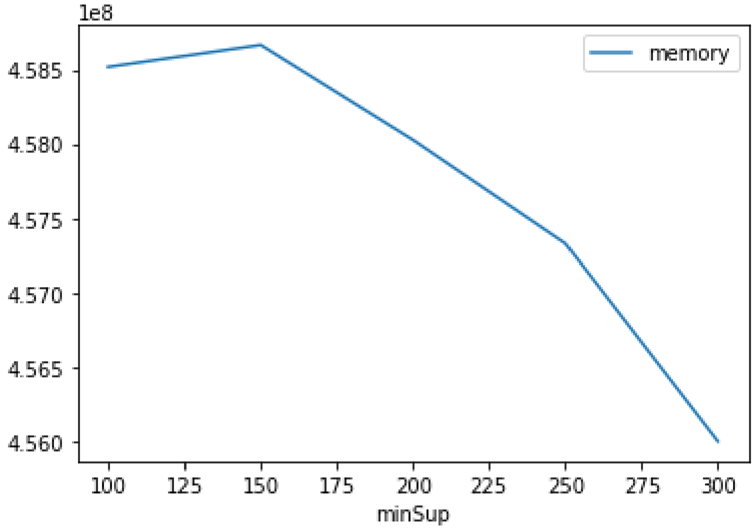
```
ab = plt.plotGraphsFromDataFrame(result)
ab.plotGraphsFromDataFrame() #drawPlots()
```



```
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
```