```
import pandas as pd
from semopy import Model
from graphviz import Source
```

```
# Load the data
df = pd.read_csv('/content/drive/MyDrive/Colab Notebooks/Dataset/AR_Dataset.csv')
df.head()
```

	AR1	AR2	AR3	AR4	CB1	CB2	CB3	CB4	CE1	CE2	...	MRP4	MMRQ1	MMRQ2	MMRQ3	M
0	4	5	2	2	4	5	4	2	4	4	...	2	3	4	1	
1	4	4	4	4	4	4	4	4	4	4	...	4	4	4	4	
2	4	5	5	4	5	3	5	5	2	2	...	2	3	4	5	
3	4	5	5	4	4	5	3	3	4	4	...	3	4	4	4	
4	4	5	4	3	4	5	4	4	4	5	...	2	2	4	3	

5 rows × 25 columns

```
# Define the SEM model
model = '''
    # Define the latent variables
    AR =~ AR1 + AR2 + AR3 +  AR4
    CB =~ CB1 + CB2 + CB3 + CB4
    CE =~ CE1 + CE2 + CE3 + CE4
    MRP =~ MRP1 + MRP2 + MRP3 + MRP4
    MMRQ =~ MMRQ1 + MMRQ2 + MMRQ3 + MMRQ4

    # Define the paths
    MRP ~ AR + CB + CE
    MMRQ ~ AR + CB + CE
'''
```

```
# Fit the SEM model
sem_model = Model(model)
sem_model.fit(data)
```

```
SolverResult(fun=2.3253135290708684, success=True, n_it=229, x=array([ 6.00664616e-01,  7.09988378e-01,  9.13829054e-01,
1.20771102e+00,
        5.21824894e-01,  7.90424123e-01,  1.05561196e+00,  8.50032632e-01,
        5.07342495e-01,  6.87448567e-01,  1.25623137e+00,  1.44935398e+00,
        6.05077568e-01,  8.72047104e-01,  7.69083767e-01,  2.68489082e+00,
       -3.01382612e+00,  7.53604481e-02, -1.08263784e+02,  1.36096323e+02,
        1.52267701e+01,  2.60311793e-01,  1.42481392e+00,  2.34308439e-01,
        3.59469919e-01,  3.80622487e-01,  1.23684856e-01,  1.78308674e-01,
        1.69509356e-01,  1.99812600e-01,  3.69625480e-01,  2.25719153e-01,
        1.07257829e+00,  4.44554840e-01,  2.71787824e-01,  5.83769740e-01,
        2.59082377e-01,  3.57792189e-01,  5.89357102e-01,  3.46116745e+00,
        3.78111845e-01,  4.10061214e-01,  5.12172257e-01,  3.92986578e-01,
        8.17548170e-02,  5.90941319e-01,  1.14147411e+00,  4.58298252e-01,
        4.77764990e-01]), message='Optimization terminated successfully', name_method='SLSQP', name_obj='MLW')
```

```
# Print the results
print(sem_model)
```

```
<semopy.model.Model object at 0x7bf029011510>
```