正则表达式

(Debug) In[21]:=
```
IdentityMatrix[5]  // MatrixForm
% // TraditionalForm
Count[IdentityMatrix[5],{0...,1,0...}]
```

(Debug) Out[21]//MatrixForm=

$$\begin{pmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{pmatrix}$$

(Debug) Out[22]//TraditionalForm=

$$\begin{pmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{pmatrix}$$

(Debug) Out[23]= 5

{0...,1,0...} 是一个pattern，匹配一个**List**，0或多个0开始，后接1个1，再接0或多个0

删除列表全零的两列

(Debug) In[59]:=
```
mat={{0,0,0,0,0,1},{1,0,0,1,0,1},{0,1,0,0,0,0},{0,0,0,0,0,1},{1,1,0,1,0,0},{0,0,0,1,
MatrixForm@ %
Transpose@ %  (*先转置，把列变成行，以方便删除*)
MatrixForm@ %
MatchQ[#, {0 ..}]&@ %
```

(Debug) Out[59]= {{0, 0, 0, 0, 0, 1}, {1, 0, 0, 1, 0, 1}, {0, 1, 0, 0, 0, 0},
{0, 0, 0, 0, 0, 1}, {1, 1, 0, 1, 0, 0}, {0, 0, 0, 1, 0, 1}}

(Debug) Out[60]//MatrixForm=

$$\begin{pmatrix} 0 & 0 & 0 & 0 & 0 & 1 \\ 1 & 0 & 0 & 1 & 0 & 1 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \\ 1 & 1 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 1 \end{pmatrix}$$

(Debug) Out[61]= {{0, 1, 0, 0, 1, 0}, {0, 0, 1, 0, 1, 0}, {0, 0, 0, 0, 0, 0},
{0, 1, 0, 0, 1, 1}, {0, 0, 0, 0, 0, 0}, {1, 1, 0, 1, 0, 1}}

(Debug) Out[62]//MatrixForm=

$$\begin{pmatrix} 0 & 1 & 0 & 0 & 1 & 0 \\ 0 & 0 & 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 1 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 1 & 1 & 0 & 1 & 0 & 1 \end{pmatrix}$$

(Debug) Out[63]= False