

a			
b	c		d
		e	
f			g

sort rows  
by number  
of non-  
zeros

b	c		d	1
f			g	3
a				0
		e		2

Row Permutation Vector  
(jdsRowPerm)

compact  
rows

b	c	d
f	g	
a		
e		

Non-zeros

0	1	3
0	3	
0		
2		

Column  
Indexes

3
2
1
1

Row Number of  
Non-zeros  
(jdsRowNNZ)

0	4	6
---	---	---

Column Start Indexes  
(jdsColStartIdx)

0	0	0	2	1	3	3
---	---	---	---	---	---	---

Column Indexes  
(jdsColIdx)

b	f	a	e	c	g	d
---	---	---	---	---	---	---

Non-zero Data Values  
(jdsData)

flatten  
vertically