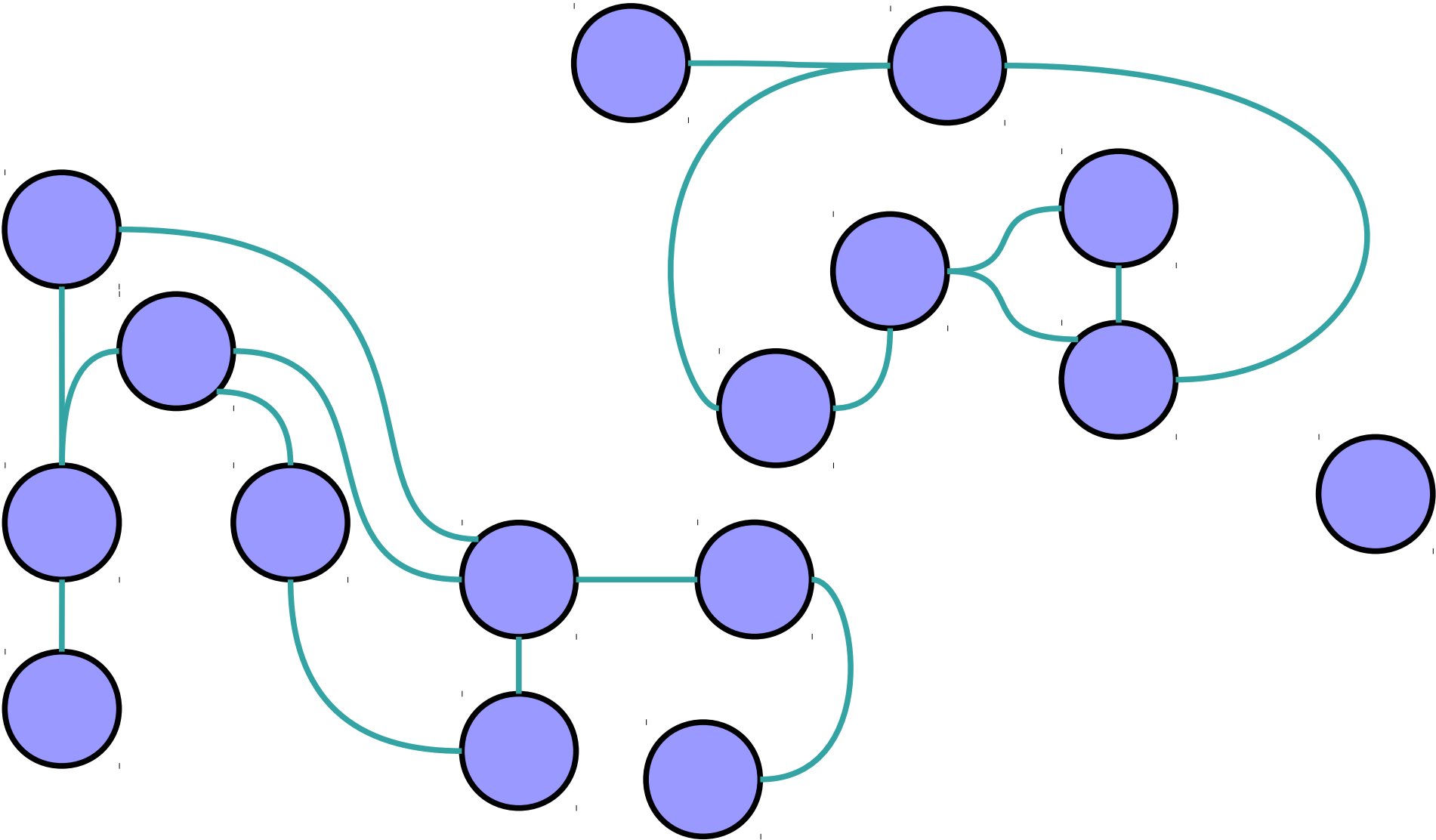
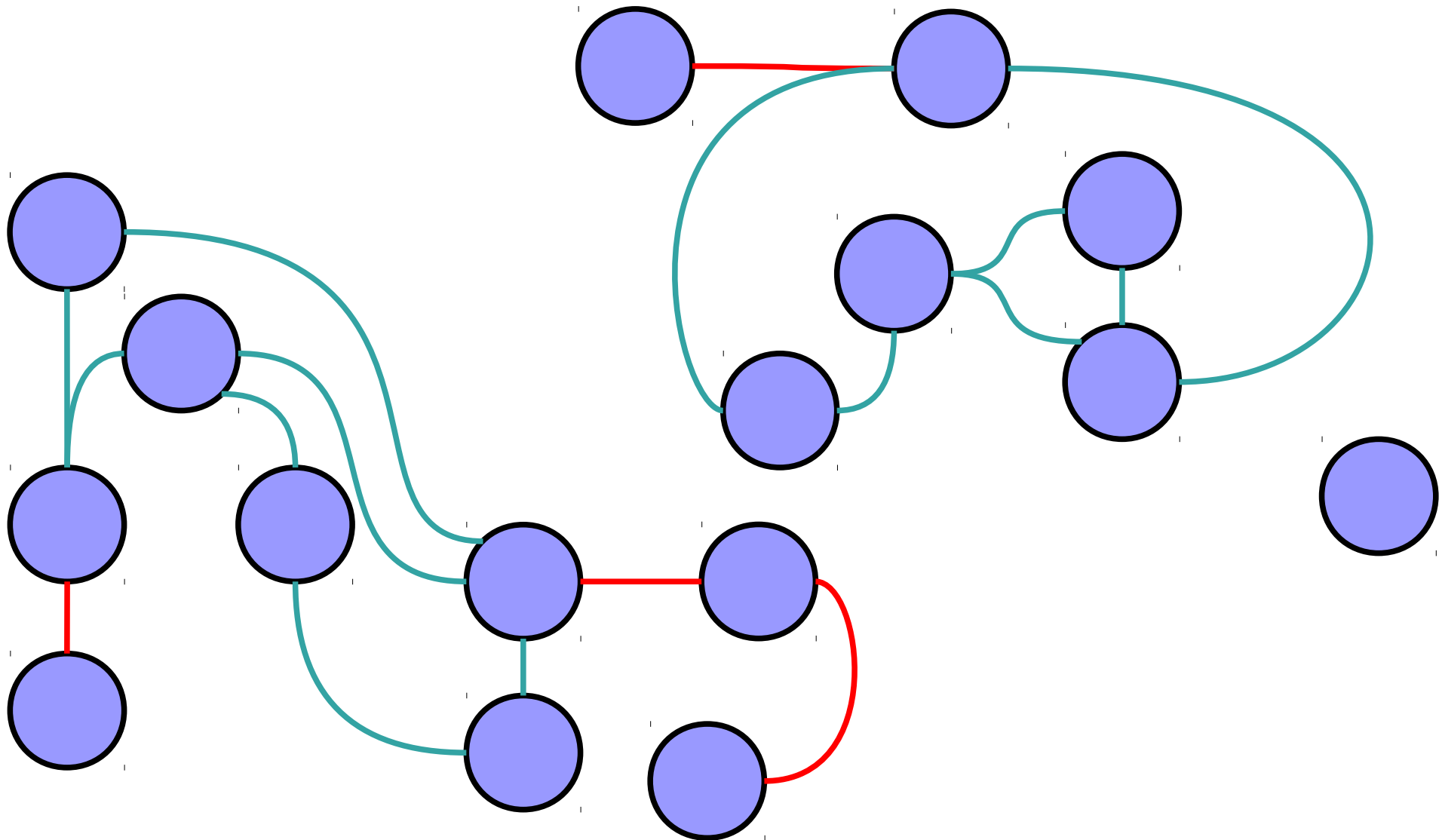


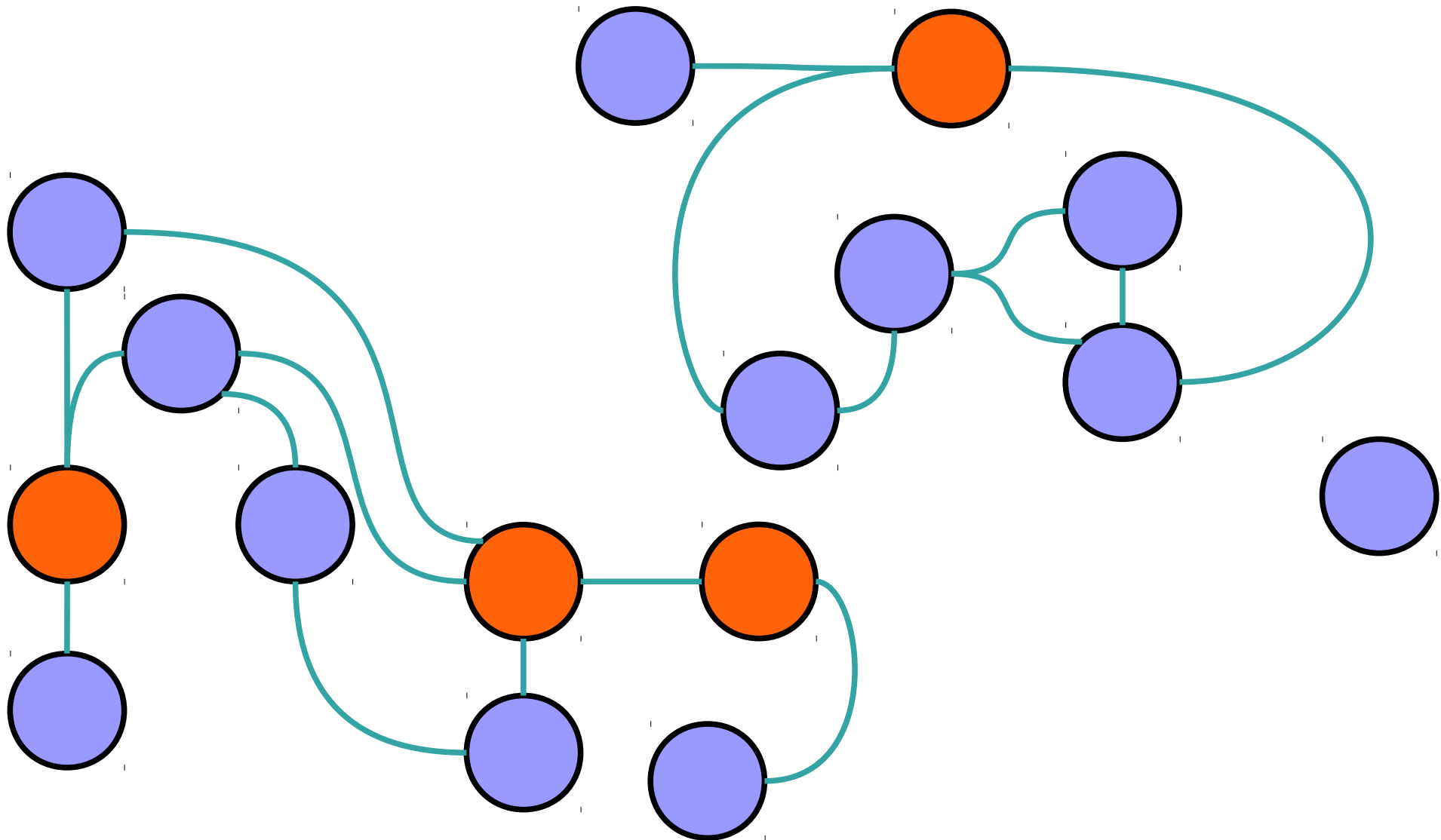
# Grafo in input



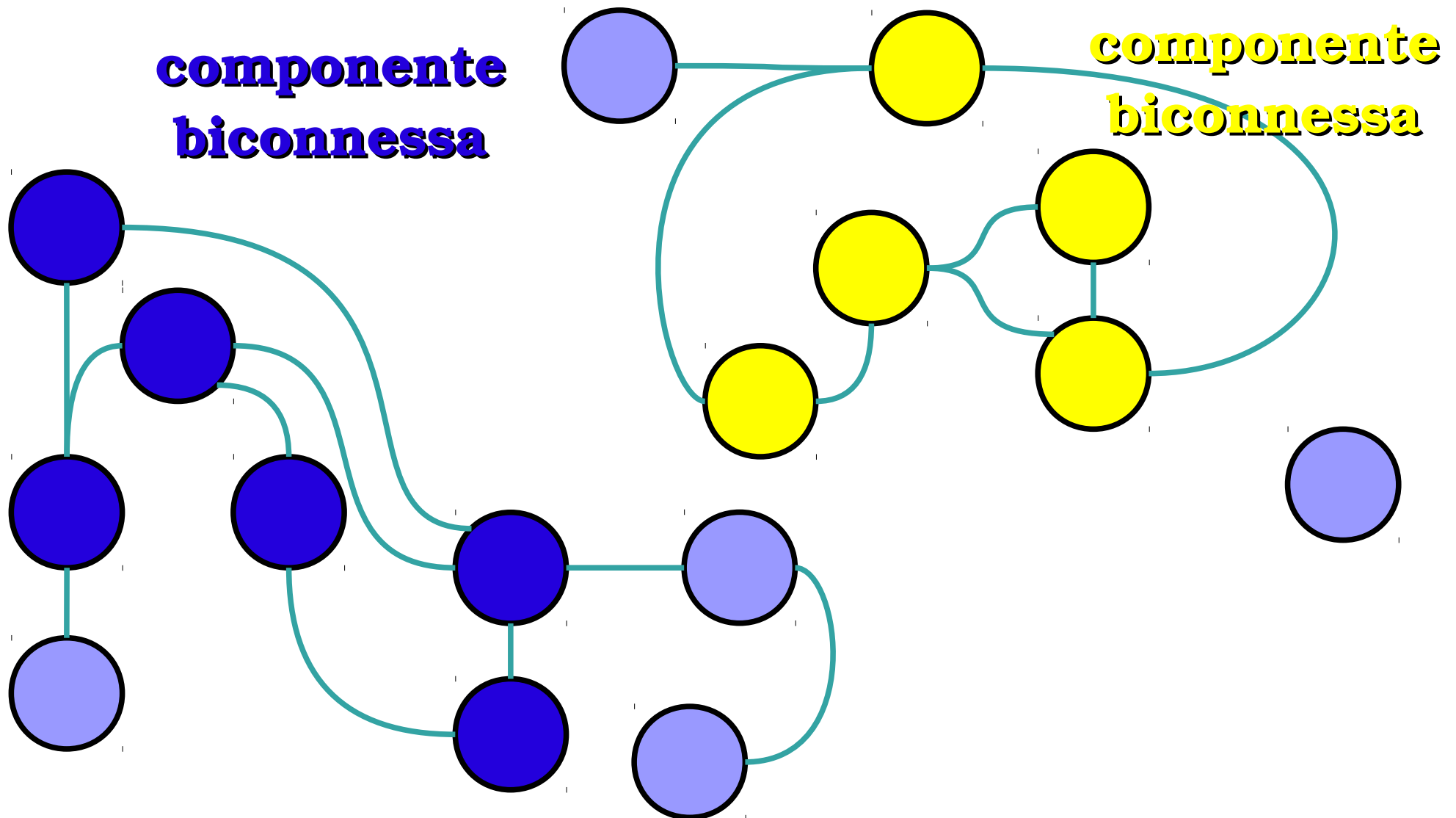
# Bridges



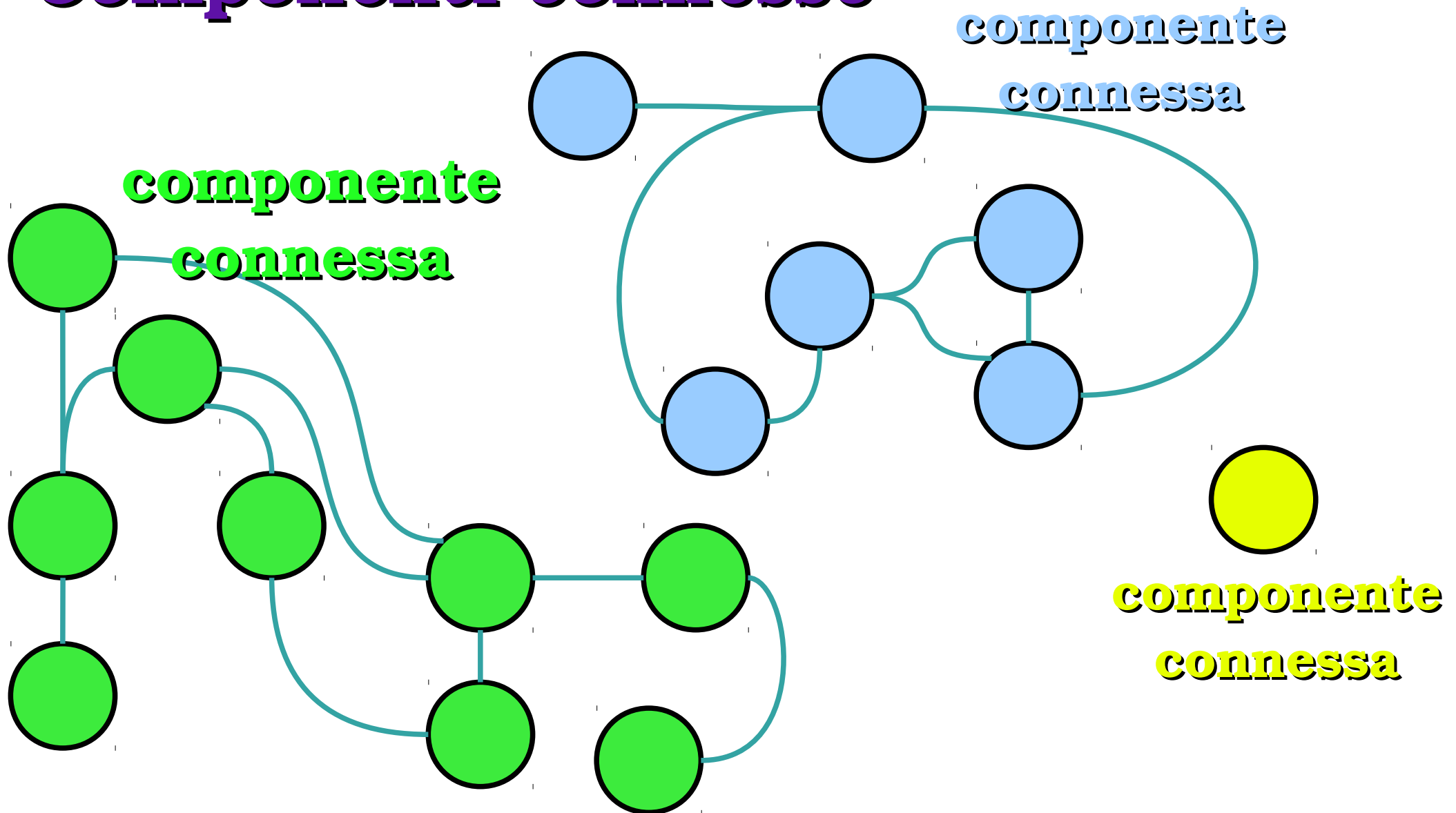
# Articulation Points



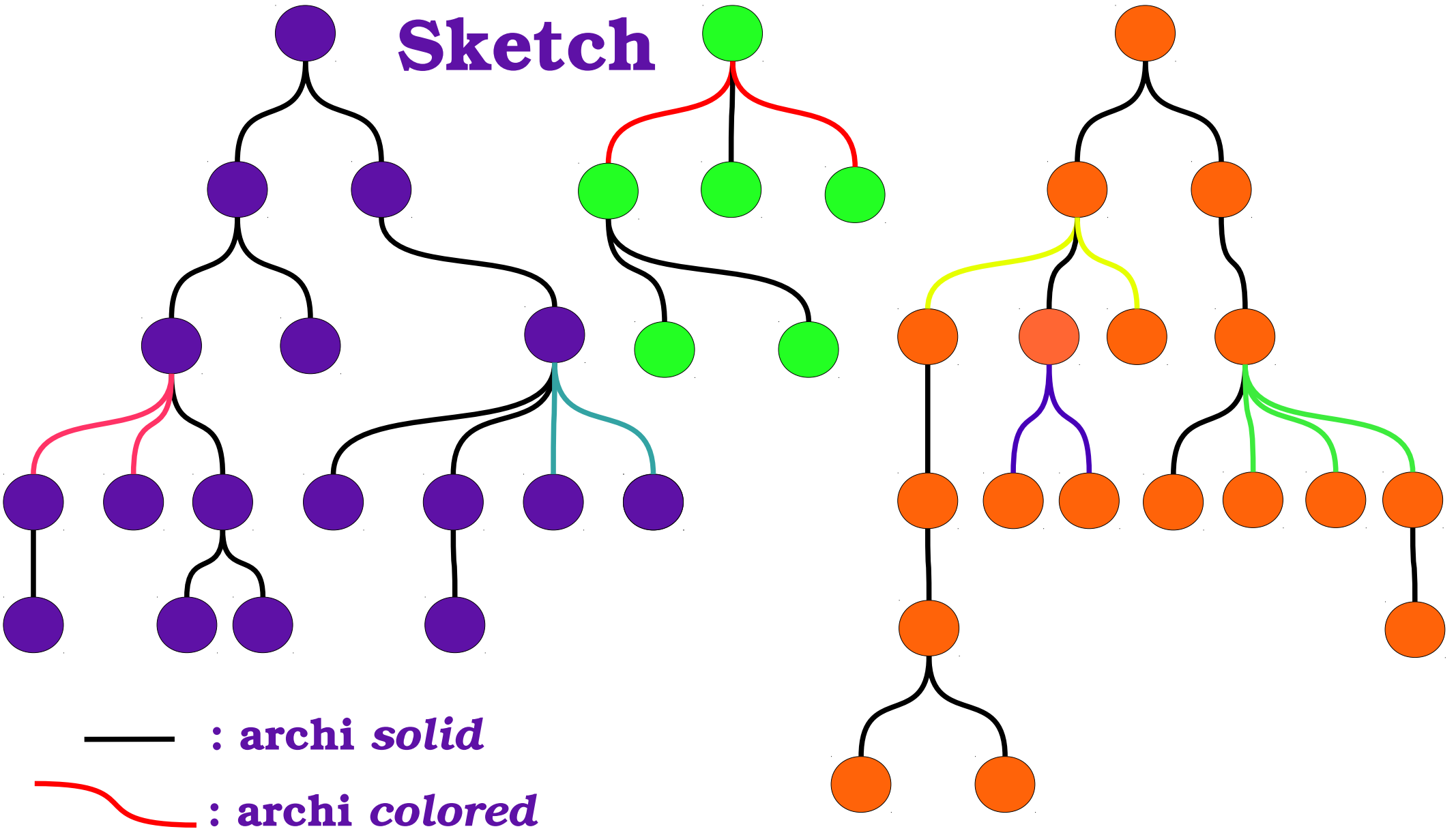
# Componenti biconnesse



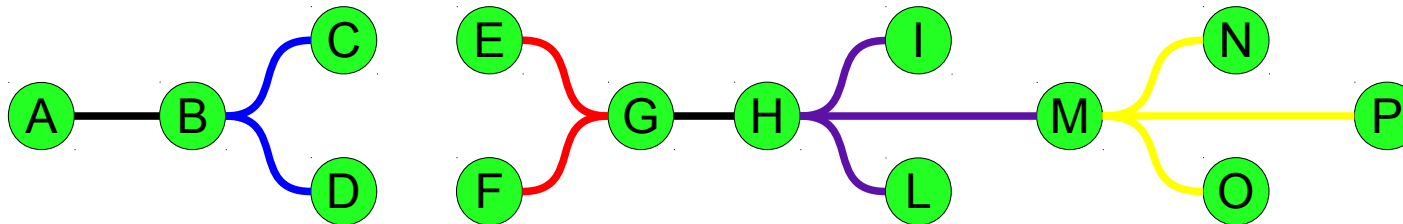
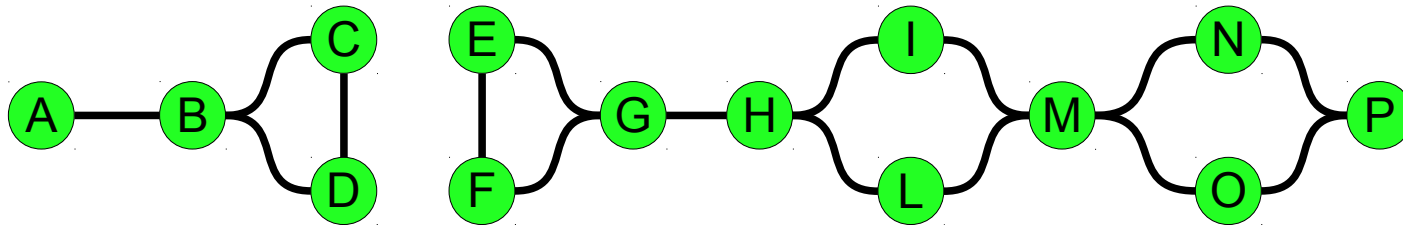
# Componenti connesse



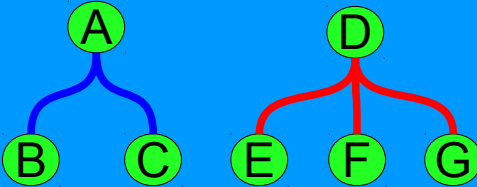

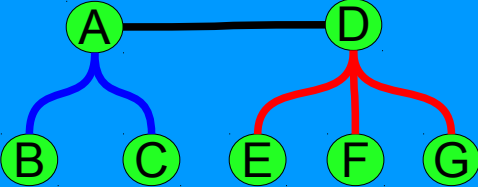
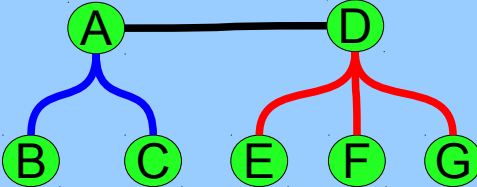

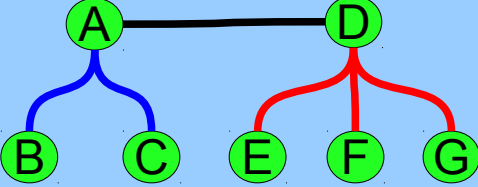
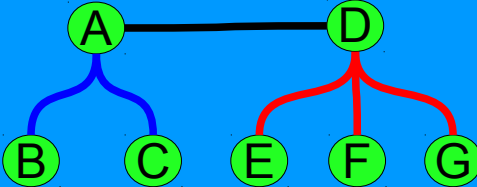

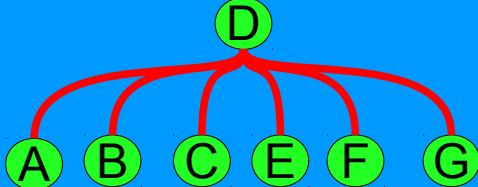
## II Navigational



**un grafo  $G$**



**Navigational Sketch di  $G$**

Navigational Sketch prima	nuovo arco	Navigational Sketch dopo
		
		
		



# Applicazione MapReduce

Master

worker

worker

worker

worker

worker

output  
file 1

output  
file 2

Input split 1

Input split 2

Input split 3

Input split 4

Input split 5

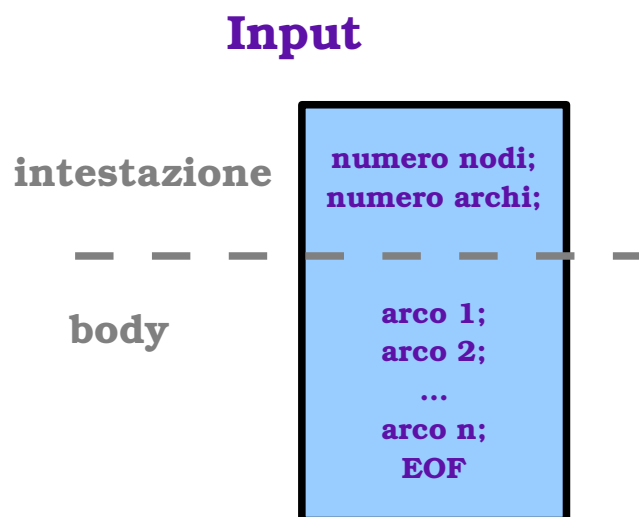
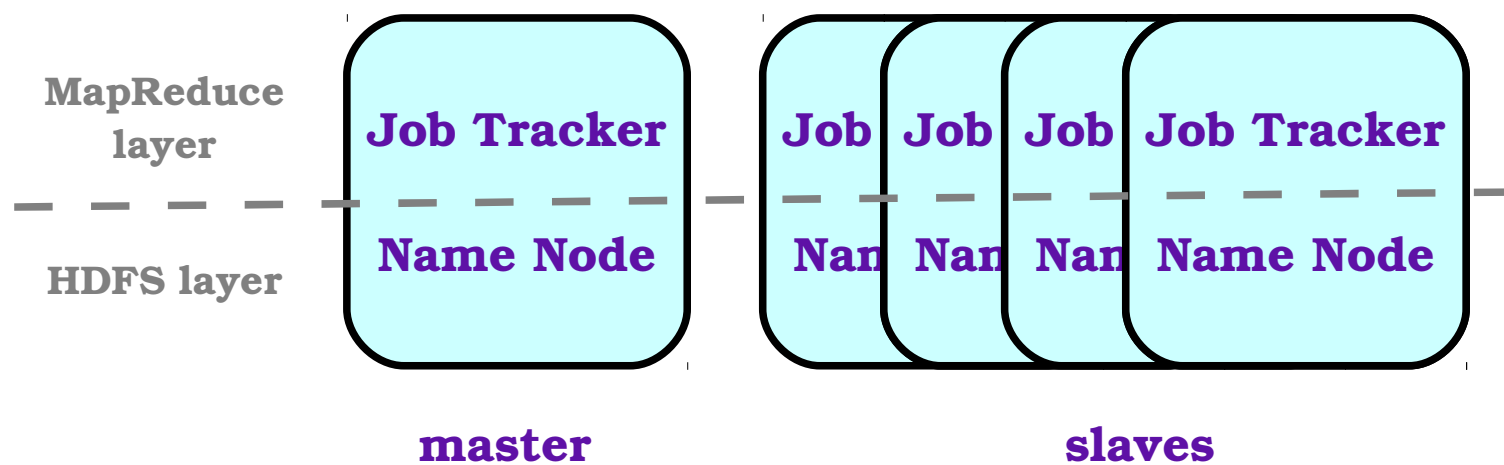
input file

fase *map*

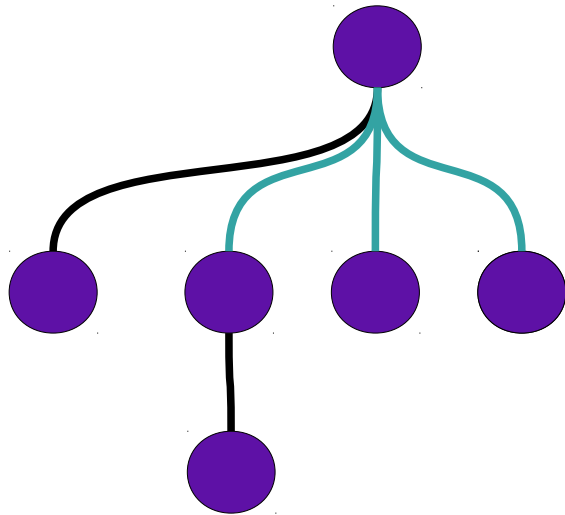
output intermedi

fase *reduce*

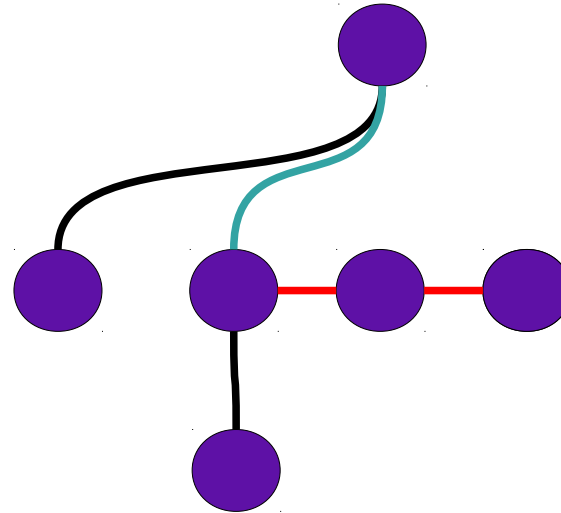
output files






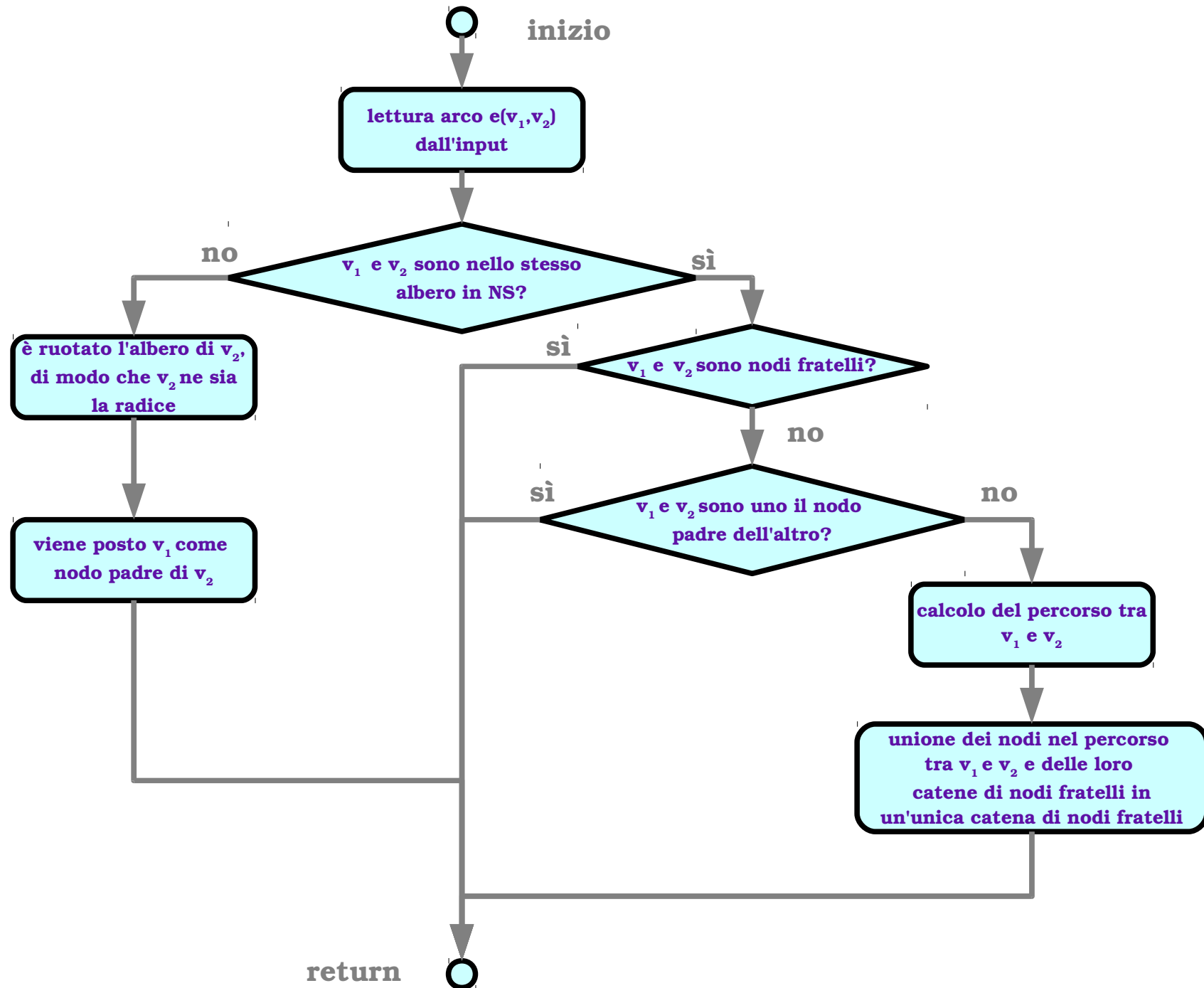
## Navigational Sketch



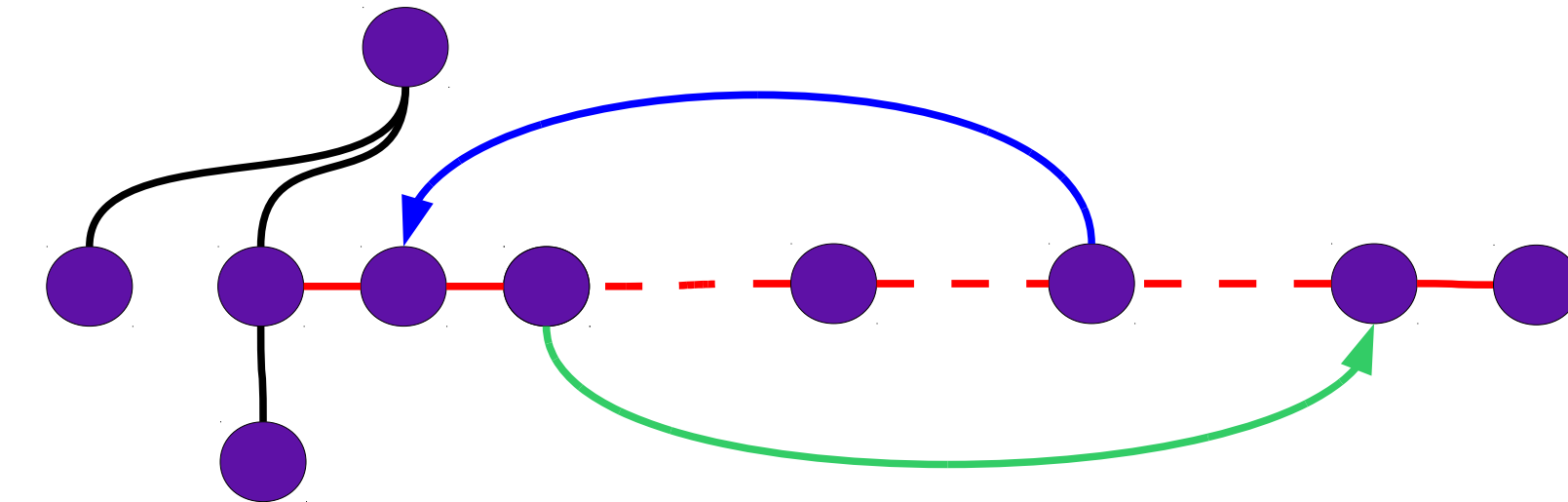
## Rappresentazione del Navigational Sketch in memoria


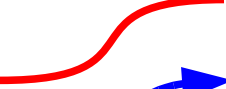
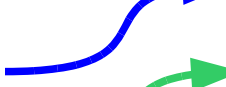



-  : arco padre-figlio *solid*
-  : arco padre-figlio *colored*
-  : arco fratello-fratello



## Gli *strong brothers*



-  : arco padre-figlio
-  : arco fratello-fratello
-  : arco *strongLeftBrother*
-  : arco *strongRightBrother*

