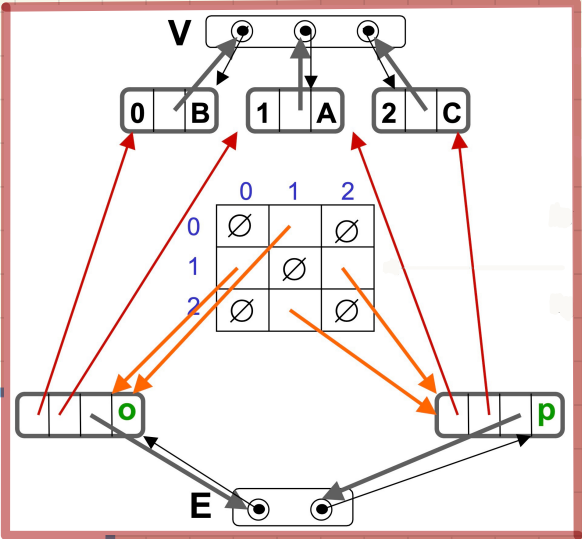
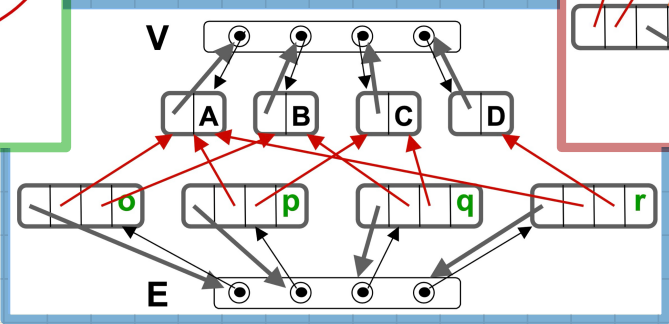
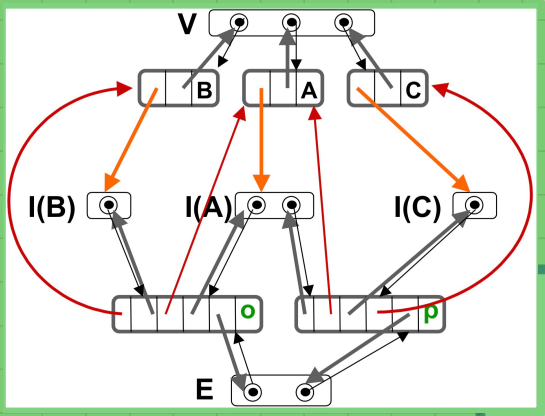


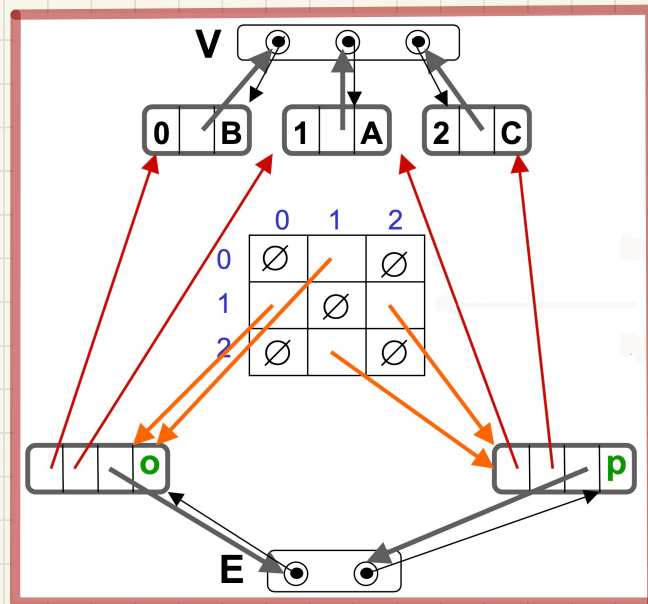
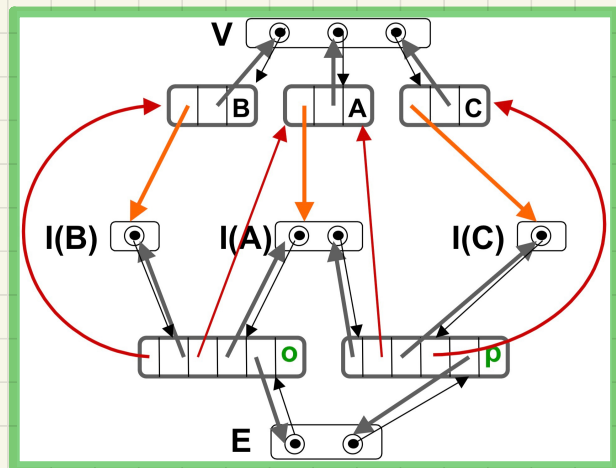
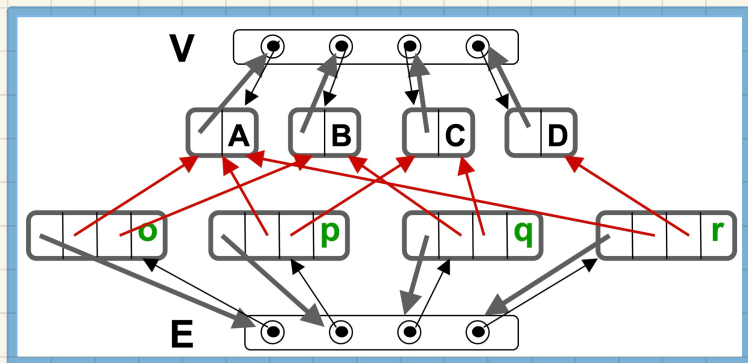
Graphs in Java: Strategies

	VERTEX	EDGE	GRAPH
ADJACENCY LIST	incidentEdges	originIncidentListPos	isDirected vertices edges
		destIncidentListPos	
EDGE LIST	vertexListPosition	edgeListPosition	matrix
ADJACENCY MATRIX	index		



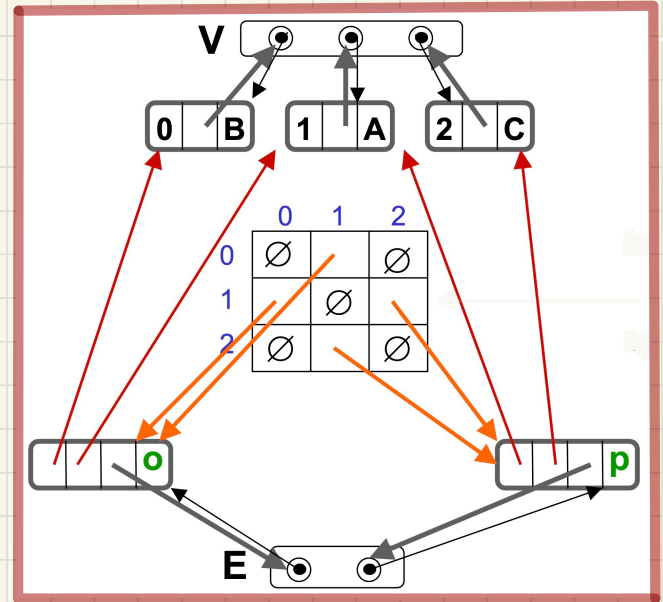
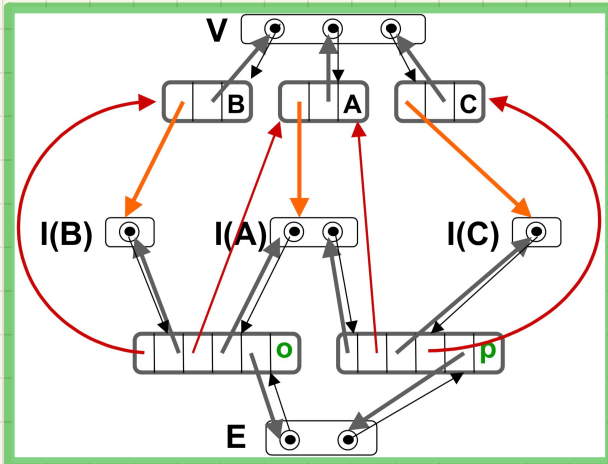
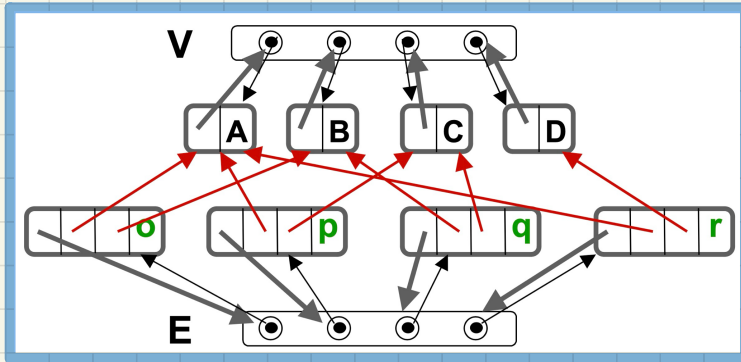
Graphs in Java: Time Complexities (1)

numVertices(), numEdges()



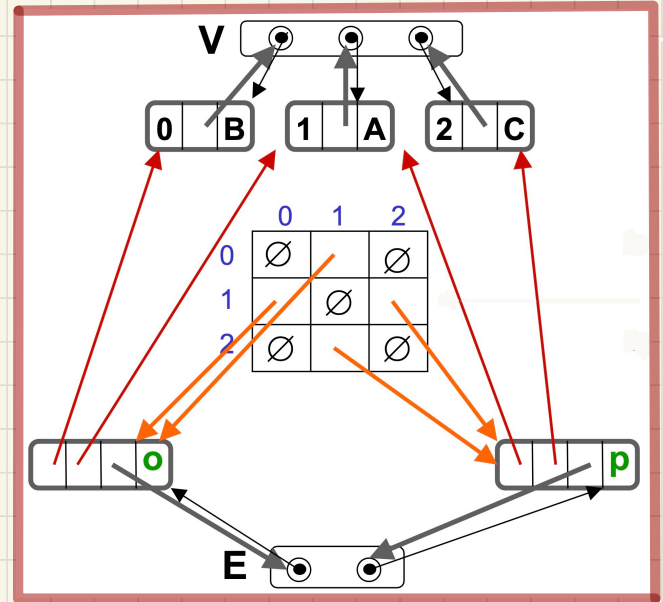
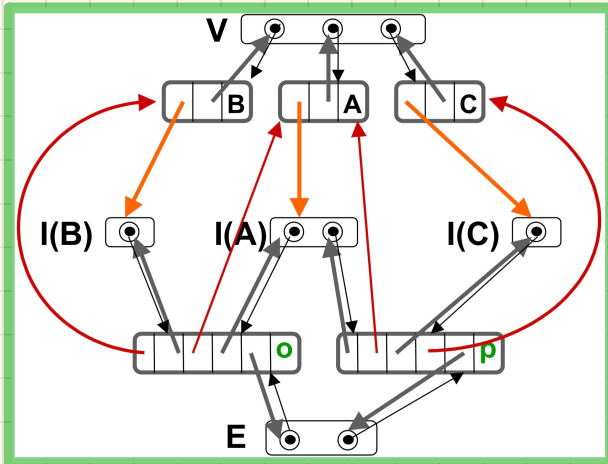
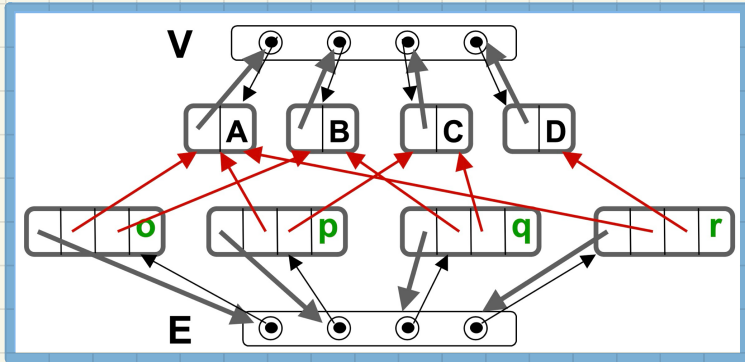
Graphs in Java: Time Complexities (2)

vertices(), edges()

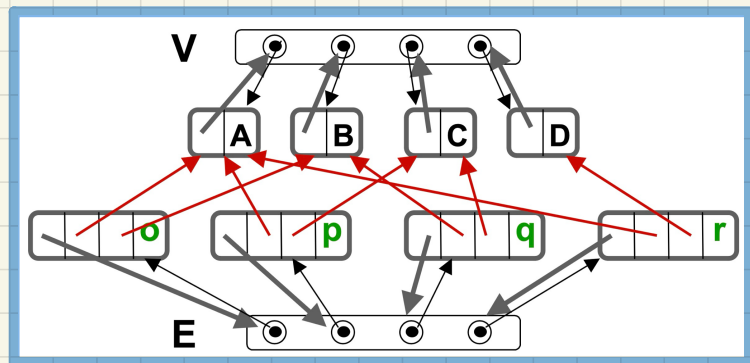


Graphs in Java: Time Complexities (3)

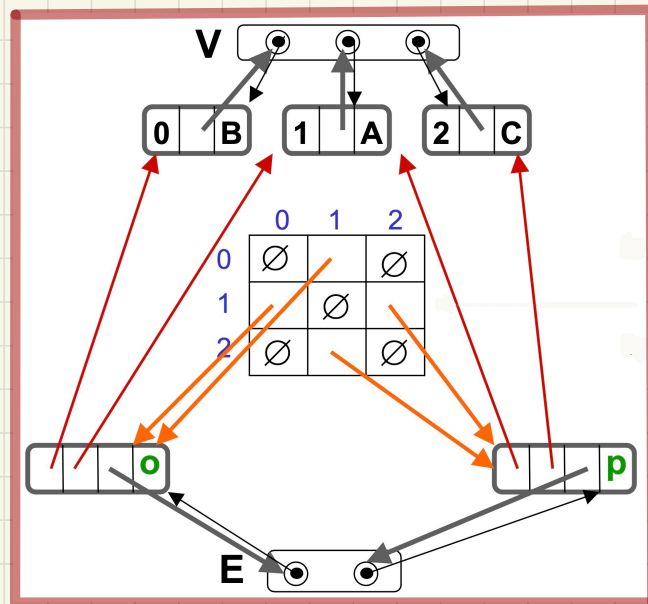
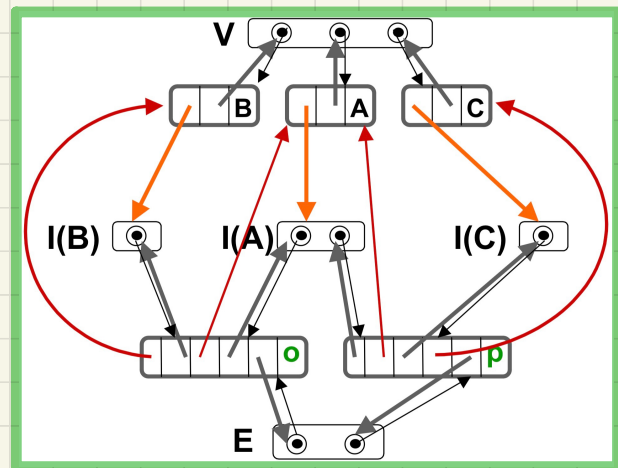
getEdge(u, v)



Graphs in Java: Time Complexities (4)

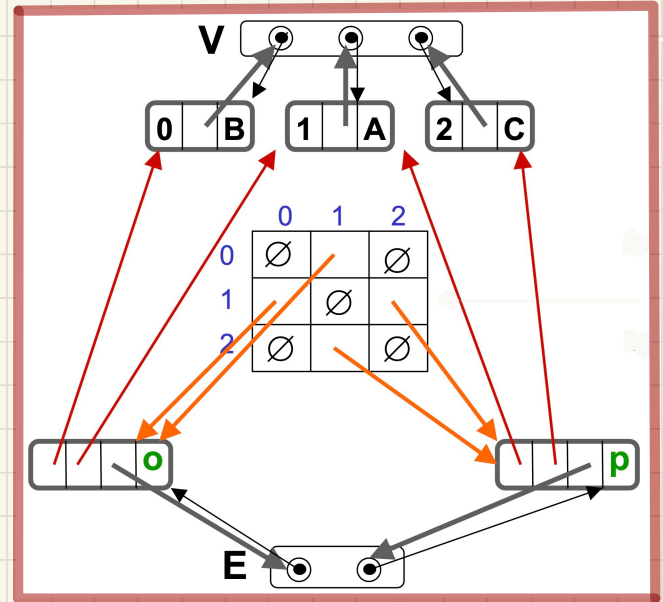
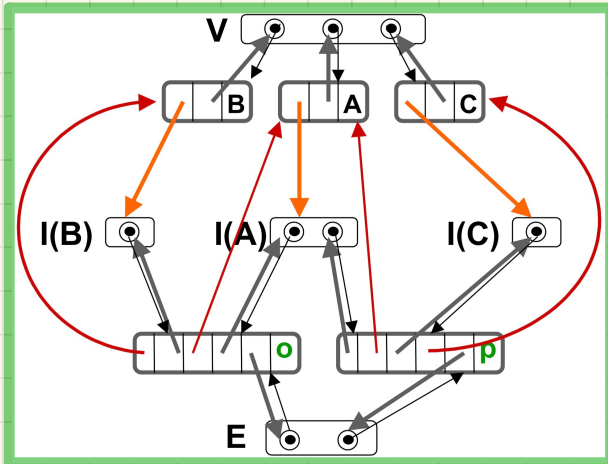
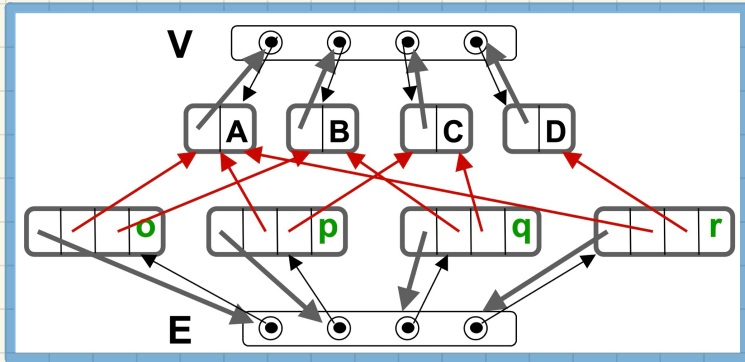


outDegree(u), inDegree(u)
inEdges(v), outEdges(v)



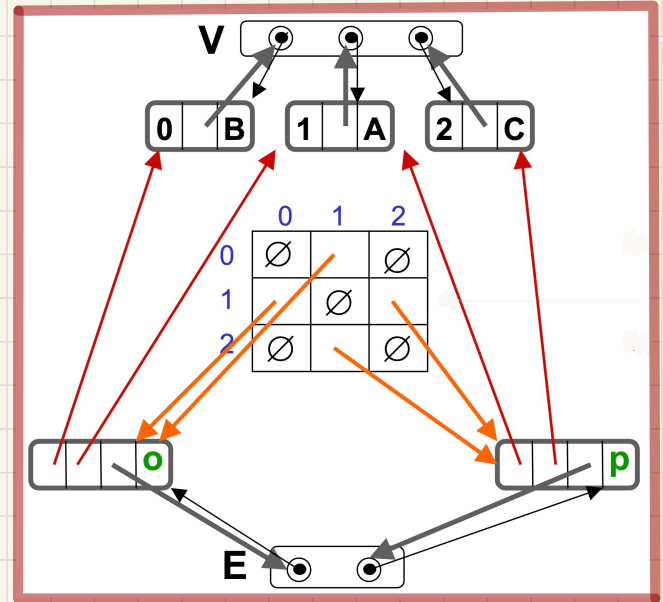
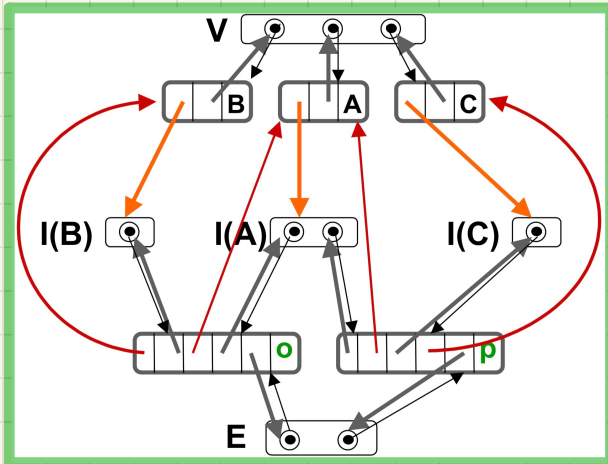
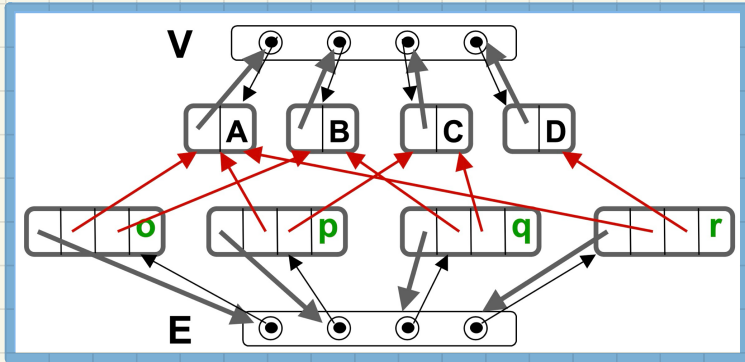
Graphs in Java: Time Complexities (5)

insertVertex(x)



Graphs in Java: Time Complexities (6)

removeVertex(v)



Graphs in Java: Time Complexities (7)

insertEdge(u, v, x),
removeEdge(e)

