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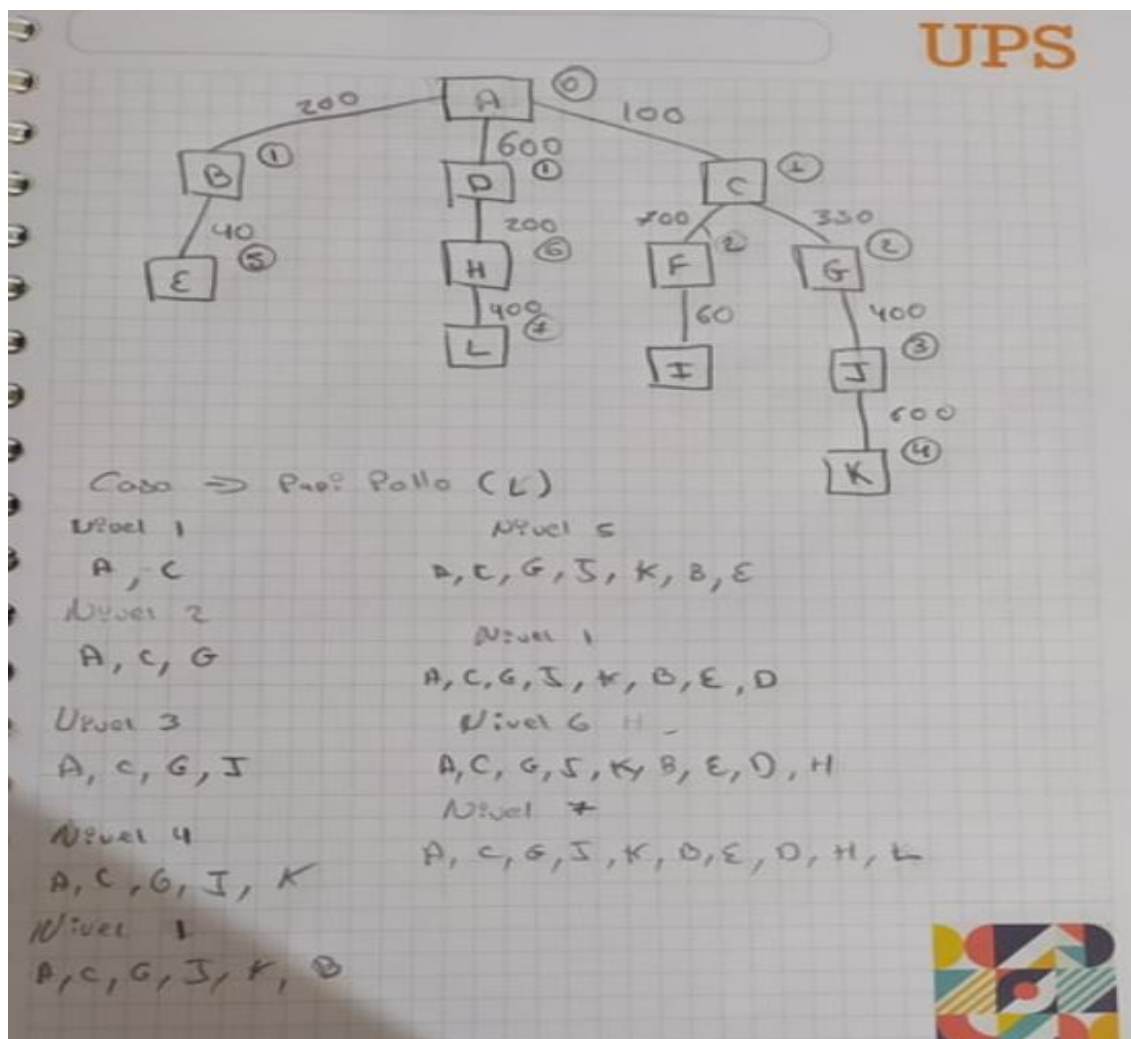
Materia: IA

Ciclo: 9no

Fecha: 20/05/2020

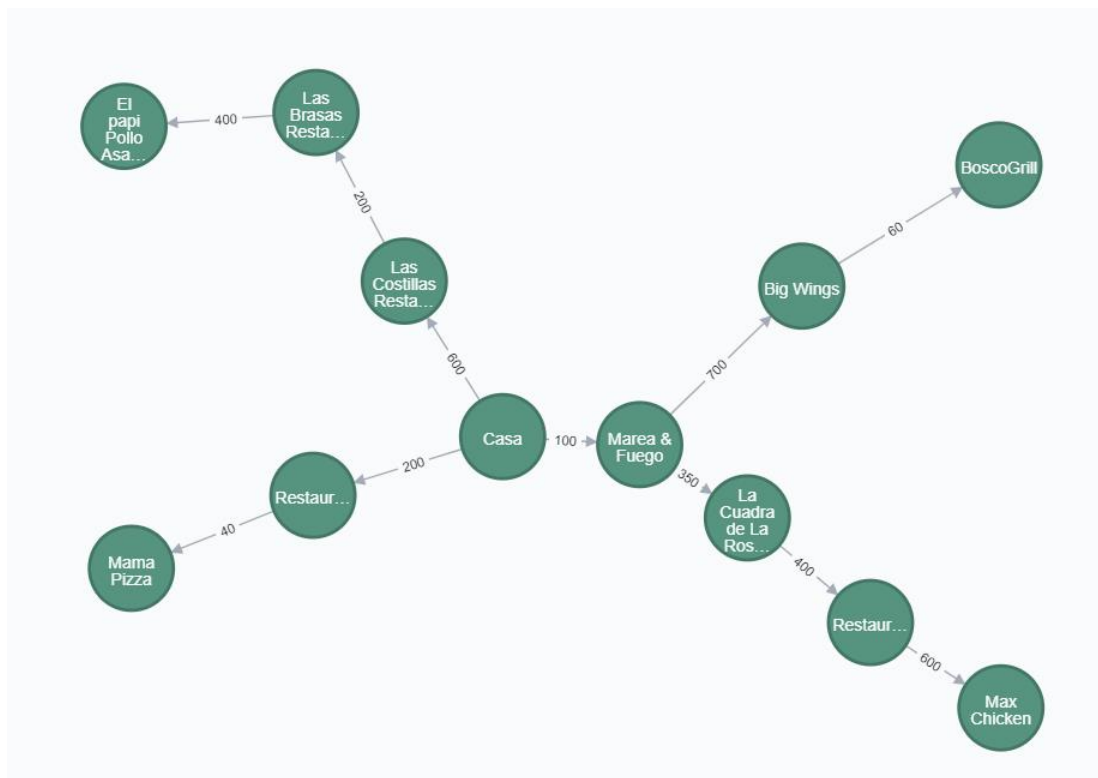
ID	NODO	COSTO
A	Casa	0
B	Restaurante Rancho Dorado 3	200
C	Marea & Fuego	100
D	Las Costillas Restaurante	600
E	Mama Pizza	40
F	Big Wings	700
G	La Cuadra de La Rosita	350
H	Las Brasas Restaurante	60
I	BoscoGrill	400
J	Restaurante La Carpa	600
K	Max Chicken	200
L	El papi Pollo Asadero Restaurant	400

### Algoritmo A\* a mano



## Algoritmo HC En Neo4j

```
CREATE
(A:Restaurante{name:'Casa'}),
(B:Restaurante{name:'Restaurante Rancho Dorado 3'}),
(C:Restaurante{name:'Marea & Fuego'}),
(D:Restaurante{name:'Las Costillas Restaurante'}),
(E:Restaurante{name:'Mama Pizza'}),
(F:Restaurante{name:'Big Wings'}),
(G:Restaurante{name:'La Cuadra de La Rosita'}),
(H:Restaurante{name:'Las Brasas Restaurante'}),
(I:Restaurante{name:'BoscoGrill'}),
(J:Restaurante{name:'Restaurante La Carpa'}),
(K:Restaurante{name:'Max Chicken'}),
(L:Restaurante{name:'El papi Pollo Asadero Restaurant'}),
(A)-[:RUTA { cost: 200}]->(B),
(A)-[:RUTA { cost: 100}]->(C),
(A)-[:RUTA { cost: 600}]->(D),
(B)-[:RUTA { cost: 40}]->(E),
(C)-[:RUTA { cost: 700}]->(F),
(C)-[:RUTA { cost: 350}]->(G),
(F)-[:RUTA { cost: 60}]->(I),
(G)-[:RUTA { cost: 400}]->(J),
(J)-[:RUTA { cost: 600}]->(K),
(D)-[:RUTA { cost: 200}]->(H),
(H)-[:RUTA { cost: 400}]->(L)
```



```

MATCH (start:Restaurante {name: "Casa"}), (end:Restaurante {name: "El papi Pollo Asadero Restaurant"})
CALL gds.alpha.shortestPath.stream({
  nodeProjection: 'Restaurante',
  relationshipProjection: {
    CAMINO: {
      type: 'RUTA',
      properties: 'cost',
      orientation: 'UNDIRECTED'
    }
  },
  startNode: start,
  endNode: end,
  relationshipWeightProperty: 'cost'
})
YIELD nodeId, cost
RETURN gds.util.asNode(nodeId).name AS NOMBRE, cost

```



The screenshot shows a query result interface with a table containing four rows of data. The table has two columns: 'NOMBRE' and 'cost'. The rows represent different restaurants and their associated costs. Below the table, a status message indicates that 4 records were streamed after 8 ms and completed after 76 ms.

NOMBRE	cost
"Casa"	0.0
"Las Costillas Restaurante"	600.0
"Las Bravas Restaurante"	800.0
"El papi Pollo Asadero Restaurant"	1200.0

Started streaming 4 records after 8 ms and completed after 76 ms.

### Conclusión:

Mediante el uso de cos podemos tener una mayor precisión acerca del mejor camino ayudando a encontrar el camino más corto de sin gastar mucha memoria al abrir todos los nodos, podemos probar rutas cortas que no llevan al destino deseado.