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Fixing the Supply Chain

Management of Vision Inc

Logistics

Supply Chain Management

Problem Description :

- large amount of paperwork and fraud at multiple points, leading to a loss of money due each year for Vision Inc

Logistics

Causes of the problems:

- Products traveling across borders require reviews
- Products need approvals from a few parties involved before arrival
- That creates lots of paperwork and it leads to fraud



BLOCK CHAIN TECHNOLOGY

Solution

BLOCKCHAIN THE BLOCK WILL HOLD TRANSACTIONS AND APPROVALS

- BLOCKCHAIN WILL CREATE A SECURE RECORD OF TRANSACTIONS AND APPROVALS.
- The implementation will reduce administrative and logistics timelines in shipping.
- A directed graph will be used to display how the blockchain will be connected
- The graph will add different clients and the product details
- It will then add edges in between those resources to show how they are linked.
- The edges will have a cost which represents the number of resources allocated to another resource or department



Record Structure of The Blockchain

Index &
Timestamp of
the Block

Current &
Previous Hashes
of the block

Data put in by
User

Nonce (Number
only used once)
by the block

Vertex and Edge representations of the Graph

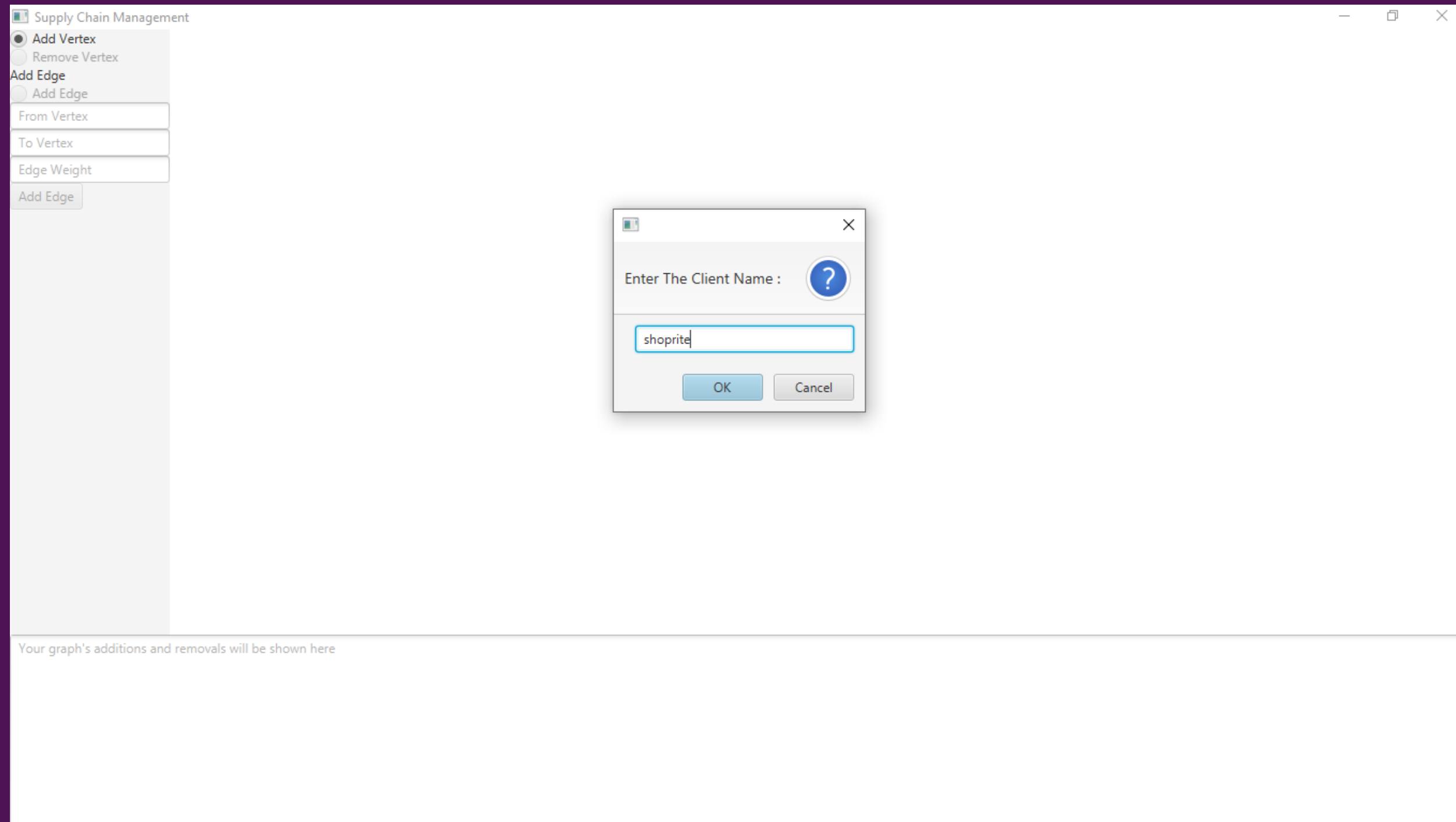
- **Vertex :** Will represent different products and clients in the allocation procedure
- **Edge:** Will represent the number of products being allocated to the adjacent vertex or vertices

Image presentations

MAIN USER INTERFACE


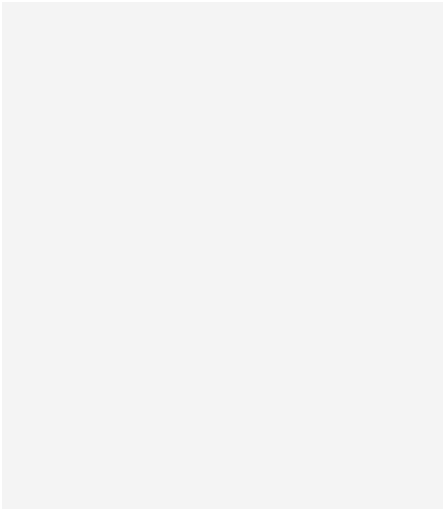
THE FIRST INTERFACE THE USER
WILL SEE AND CLICK ON THE
WHITE PANE TO ADD THE FIRST
BLOCK OF INFORMATION

ENTERING CLIENT INFORMATION THIS WHEN THE USER WILL BE ENTERING CLIENT INFORMATION



RECORD STRUCTURE IMAGE

THIS WHERE THE INFORTMATION
OF THE BLOCK WILL BE
DISPLAYED, AT THE BOTTOM OF
THE PROGRAM



Block # : 0

PreviousHash : null

Timestamp : 1620475841793

Data : shoprite

Nonce : 2661342

CurrentHash : 000008e40bdd12330b90e3f5e58c541f37a7cda14e4e30168132098b86c0ce91

Node Name: shoprite Node Cost: 5000

EDGES OF THE GRAPH

THIS WHERE THE USER WILL BE ABLE TO CONNECT EACH CLIENT TO DISPLAY THE BLOCKCHAIN DISTRIBUTION

Supply Chain Management

Add Vertex

Remove Vertex

Add Edge

Add Edge

I

kjhk

60

Add Edge

```
graph TD; kk((6786  
kk)) -- 60 --> I((435  
I)); I -- 60 --> kjhk((76876  
kjhk));
```

Nonce: 7557002

CurrentHash : 0000090c8fc6014d975a494fb26e977a0b9b54e5e584b4a67aa1b57cb24997ba

Node Name: I Node Cost: 435

Added

Edge: [[kk(6786)] -> [I(435)] = 60

]

Added

Edge: [[I(435)] -> [kjhk(76876)] = 60

]