

CARRUS

ABSTRACT

CARRUS is a software aimed to be implemented in kiosks to bridge the gap between shops and shoppers on the go. It aids urban dwellers to search, locate and buy products through a kiosk and just pick them up at the shop saving time at billing counters and reducing crowding at stores.

CARRUS: A PROJECT

1. Roles and responsibilities.

- Vishnu Vardhan V (Team Leader, Front End, SQL Backend)
- Savion Mario Sequeira (Front End, SQL Backend)
- Shreyas C (Front End, SQL Backend)
- Shruthi M (Front End, SQL Backend)

2. Stakeholders.

- Shoppers (End Users)
- Shopkeepers
- Advertising Agencies
- City Corporation
- System Admin (Maintenance)

3. Team goals and a business objective.

- To create an easy and interactive solution for on the go shoppers
- Contribute towards the smart city vision.
- Help local shopkeepers boost their business.
- Generate revenue through advertising.
- Reduce billing time and crowd at shops, in turn reducing infrastructure required to set up a shop.

4. **Background and strategic fit.**

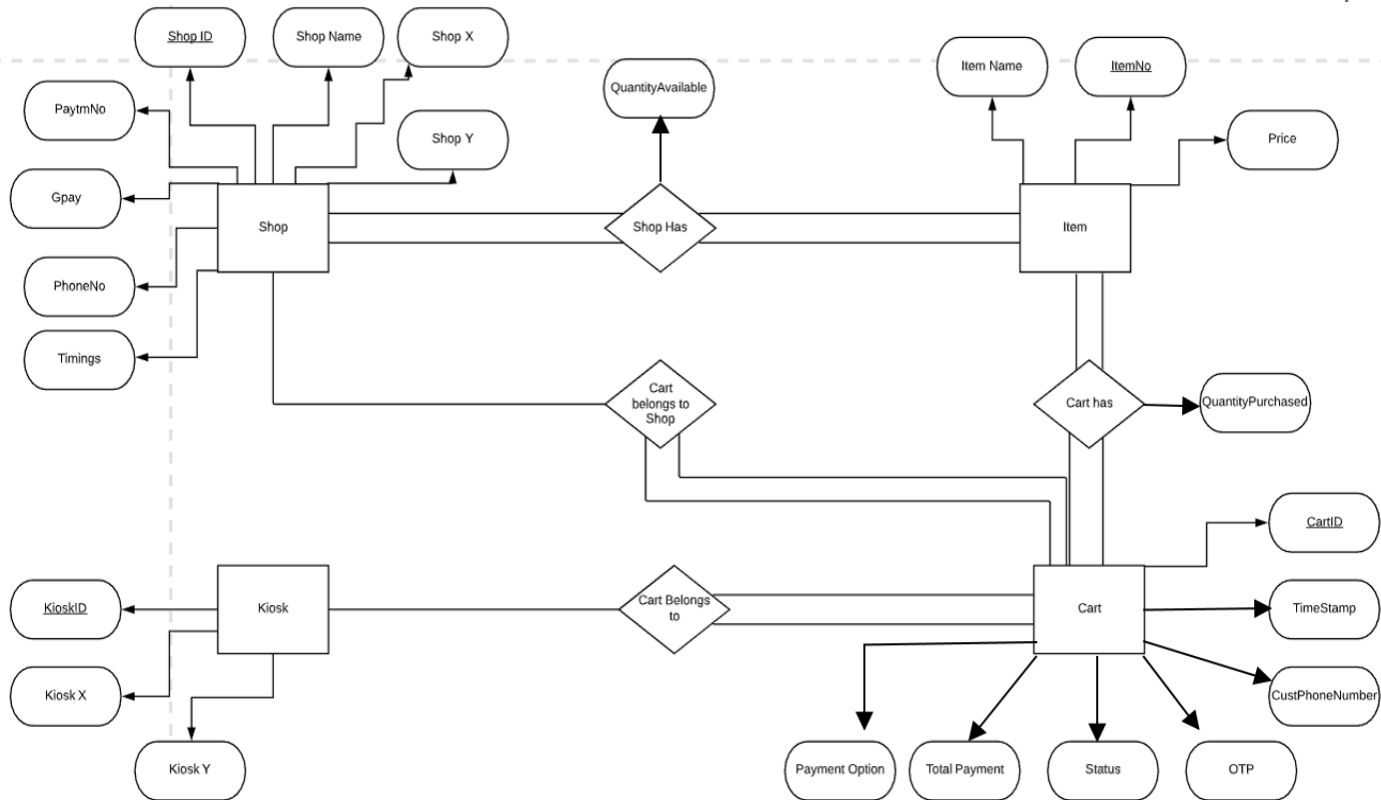
- Inspiration for this project occurred because we felt a need to fill the void between app-based grocery shopping which isn't instant and physical store shopping which is time consuming.
- During the pandemic we witnessed that most app-based shopping solutions couldn't meet everybody's need and had to stop taking new orders before fulfilling old ones. On the other hand, most people were reluctant to go to shops due to crowding and billing time.
- This project is a solution that will boost local shops business and save shoppers time.
- Since, a smart city is one that provides infrastructure to ease our day to day activities with technology and also benefit businesses in some way, CARRUS is an affordable solution to meet these needs.
- Zero paper usage makes the solution sustainable.

5. **Assumptions.**

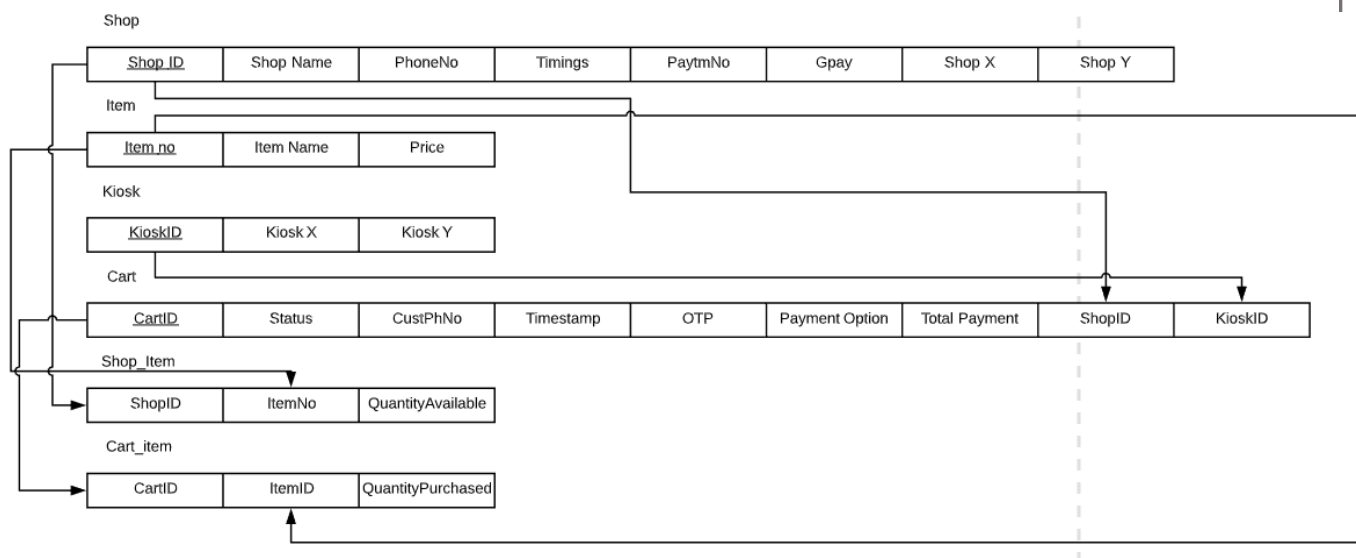
- Availability of uninterrupted electricity supply to the kiosk.
- Availability of uninterrupted internet service to the kiosk.
- Shelter to the kiosk from natural elements like rain, dust, etc.
- Basic English language literacy by the users.

DESIGN

➤ ER DIAGRAM



Entity Relationship Diagram



Relationship Schema

CARRUS: REPORT

➤ DATASET

- MK Retail

| Item Name | Quantity |
|---------------|----------|
| Lays | 7 |
| Heinz | 3 |
| Oreo | 103 |
| Quaker Oats | 17 |
| Cavin's | 25 |
| Cup Noodles | 5 |
| Hide and Seek | 4 |
| Red Bull | 20 |
| Oil | 10 |
| Cake | 40 |

- Aishwarya

| Item Name | Quantity |
|-----------------|----------|
| Coca Cola | 43 |
| Lays | 23 |
| Cadbury | 77 |
| Tropicana | 11 |
| Heinz | 55 |
| American Garden | 5 |
| Kurkure | 9 |
| Jolly Rancher | 19 |

- Reliance Mart

| Item Name | Quantity |
|---------------|----------|
| Lays | 34 |
| Tropicana | 25 |
| Milk | 67 |
| Jim Jam | 89 |
| Pasta | 12 |
| Jolly Rancher | 40 |
| Monster | 25 |
| Bounty | 40 |

CARRUS: REPORT

- More

| Item Name | Quantity |
|---------------|----------|
| Coco Cola | 32 |
| Heinz | 34 |
| Maggi | 64 |
| Oreo | 88 |
| Kellogg's | 20 |
| Quaker Oats | 100 |
| Cavin's | 6 |
| Kwality Walls | 44 |
| Cup Noodles | 11 |
| Red Bull | 9 |

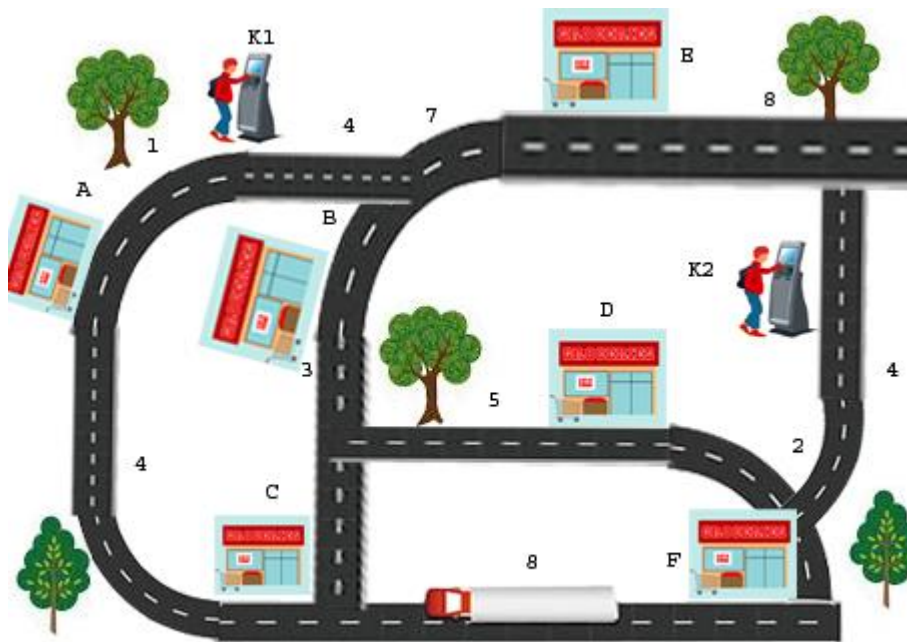
- KwikEMart

| Item Name | Quantity |
|-------------|----------|
| Lays | 50 |
| Cadbury | 58 |
| Tropicana | 15 |
| Oreo | 11 |
| Quaker Oats | 64 |
| Pringles | 10 |
| Cavin's | 25 |
| Kurkure | 35 |
| Monster | 10 |
| Cake | 15 |

- Classic Grocers

| Item Name | Quantity |
|-------------|----------|
| Heinz | 3 |
| Oreo | 13 |
| Quaker Oats | 93 |
| Pringles | 10 |
| Sprite | 12 |
| Snickers | 17 |
| Pasta | 16 |
| Red Bull | 3 |
| Nestle | 17 |
| Bounty | 40 |

➤ IMPLEMENTATION OF DIJKSTRA'S ALGORITHM



Dijkstra's algorithm is used to find the nearest shop from the kiosk being operated. If the user is utilising kiosk 1 in the above example then using the algorithm the nearest shop if the item is available will be shop A.

BUDGET PLAN (APPROXIMATE COSTS)

➤ Initial investment

| ITEM | COST PER ITEM | QUANTITY | TOTAL AMOUNT |
|------------------|---------------|-----------------------|-----------------|
| Kiosk | 12,000 | 10 | 1,20,000 |
| Operating system | 9,299 | 1 | 9,299 |
| | | Total (in INR) | 1,29,299 |

➤ Recurring Costs

| ITEM | COST PER ITEM | QUANTITY/ TIME VALIDITY(MONTHLY) | TOTAL AMOUNT |
|-------------|----------------|-------------------------------------|---------------|
| Electricity | 9.95p per unit | 21.6kW | 21,600 |
| Internet | - | Unlimited(1Gbps) | 20,000 |
| | | Total (in INR) | 41,600 |

FUTURE SCOPE

- Can implement schemes for few customers or shops to get priority which will also act as a method to generate revenue.
- Kiosks can act as emergency service contact machines with quick links to police, ambulance and fire services.
- Users can also compare prices of the product among different shops in the vicinity.