

# HAINAN CHICKEN

Andre Gunawan

Hansel Tritama

William Tan

## OUR CLIENT

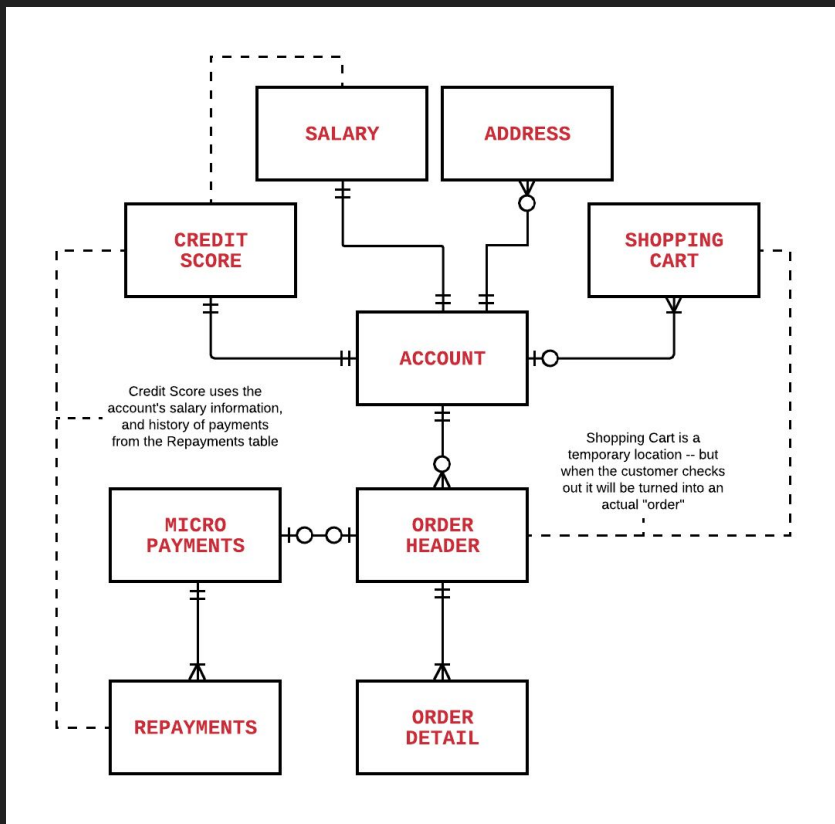
**Bridge Southeast Asia** is a financial technology firm based in Singapore and the Philippines. Their platform, “Bridge Access,” provides financial services for affiliated employees to do loans, insurance and micropayments by integrating to existing payroll services.

Since their platform is still early in development -- we are tasked to do their “shopping” module which allows clients to purchase items through a third-party online vendor, [www.goods.ph](http://www.goods.ph) . Customers can purchase items by payment installments (called ‘micropayments’) which are automatically deducted from their payroll.

# SCOPE

- Shopping Module.
  - UI / UX
    - Storefront and Product Details
  - Shopping Cart Features
    - Add to Cart, Update Quantity and Delete Items in Cart
  - Checkout Items
  - Product Filter
    - Search
    - Price Range
    - Category
    - Pagination (limiting items per page)
- Database Restructuring
- Formulation of a Credit Score for Customer Evaluation
- Item Recommendation for Shopping Module (for Future Development)

# DATABASE RESTRUCTURING

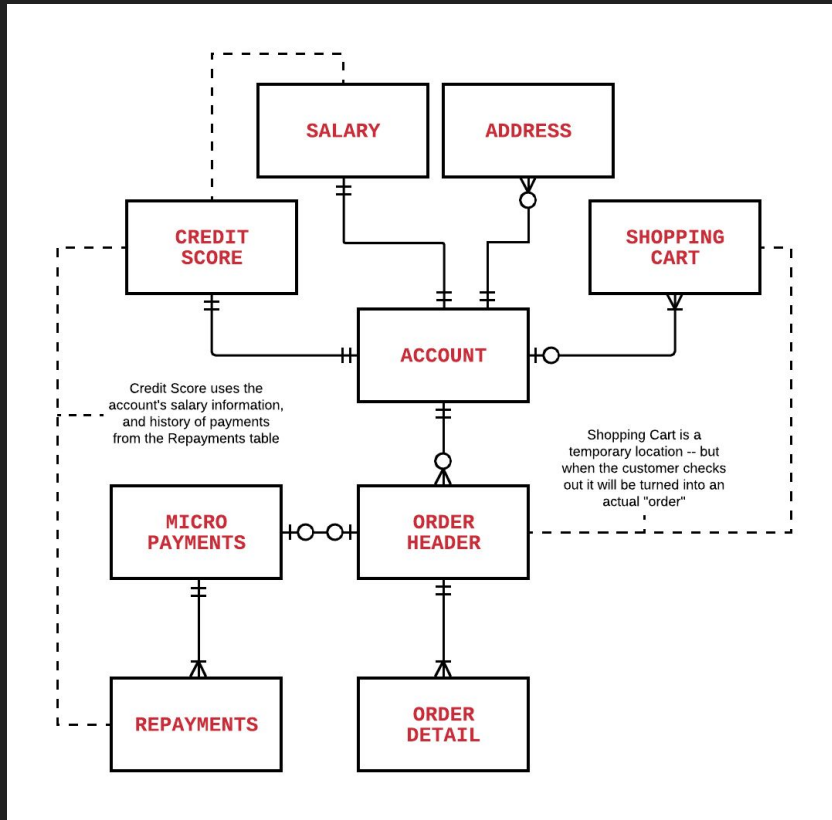


We encountered major flaws in their database structure, so we decided to restructure their database to make it more consistent, more efficient and with less redundancies.

The old database structure is not “connected” because they don’t use foreign keys, some attributes appear again multiple tables, it’s not normalized, and moreover, the most frustrating thing is that certain attributes don’t have the correct data types, which complicated the query process.

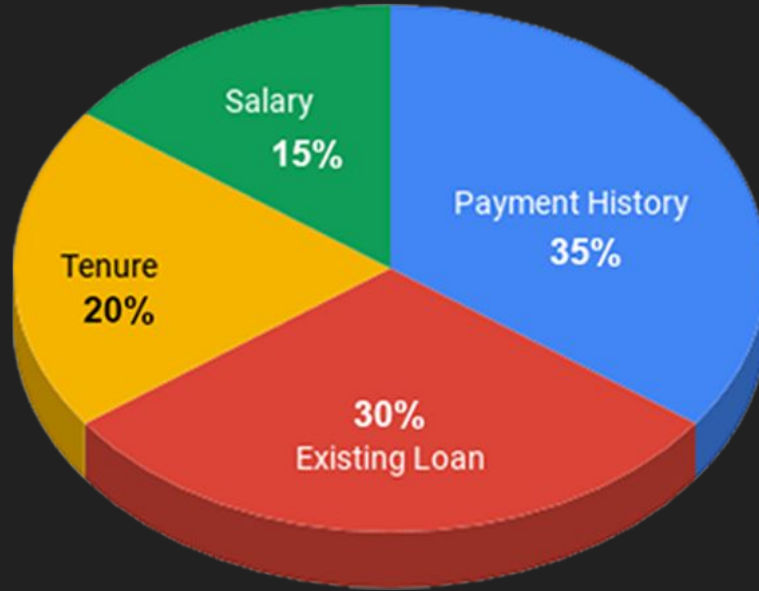
Database restructuring took the most of our time doing our project. But we’re thankful that we did this first.

# WORKFLOW



1. Customer adds items to their shopping cart, but they can update the quantity or remove items from the cart
2. When they want to check out, an order will be created in **ORDER HEADER** table, which also contains things they buy recorded in the **ORDER DETAIL** table.
3. The customer has the option to choose an existing address on file (**ADDRESS** table), or add a new address for shipping (this will automatically add to the database)
4. The total amount of the order will be broken down into payment installments via the **MICROPAYMENTS** table, which will be deducted from their payroll.
5. The schedule of the payment installments is generated in the **REPAYMENT** table, which contain a foreign key to the parent **MICROPAYMENT** table.

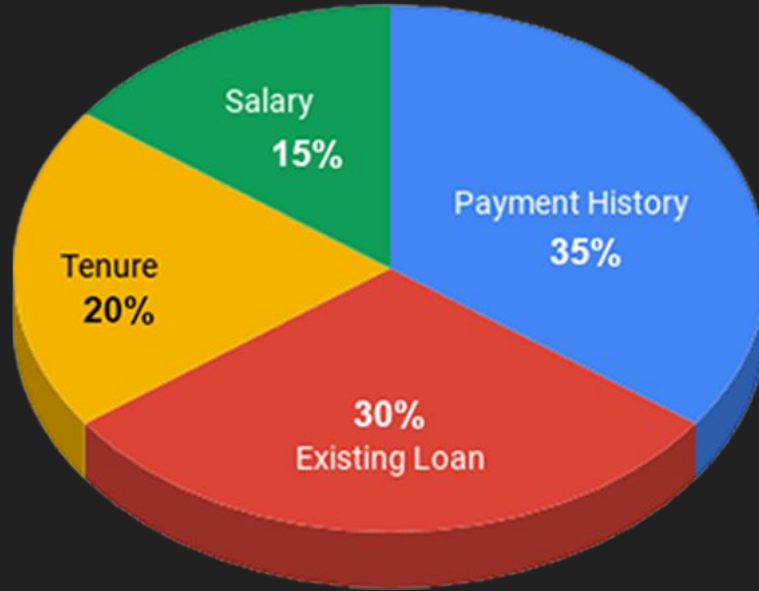
# CREDIT SCORE FORMULATION



MAX SCORE = 850 PTS

For the credit score, we devised our own formulation based on the FICO score. The calculation for this is done using **SQL Stored Procedures**. Since all the necessary data is in the database already, we decided to use make a procedure to compute all the scores in SQL to hasten the calculation (we notice that JS is super slow)

# CREDIT SCORE FORMULATION

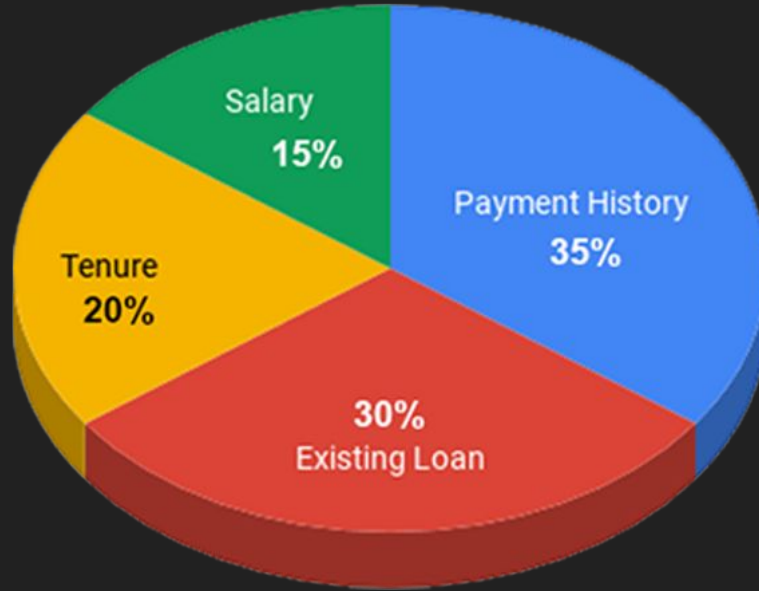


MAX SCORE = 850 PTS

## PAYMENT HISTORY SCORE

Max Score	300 pts
Base Score	150 pts
On-time Payments	(+5 pts)
Late Payments	(-5 pts)
Late, Unpaid	(-10 pts)

# CREDIT SCORE FORMULATION



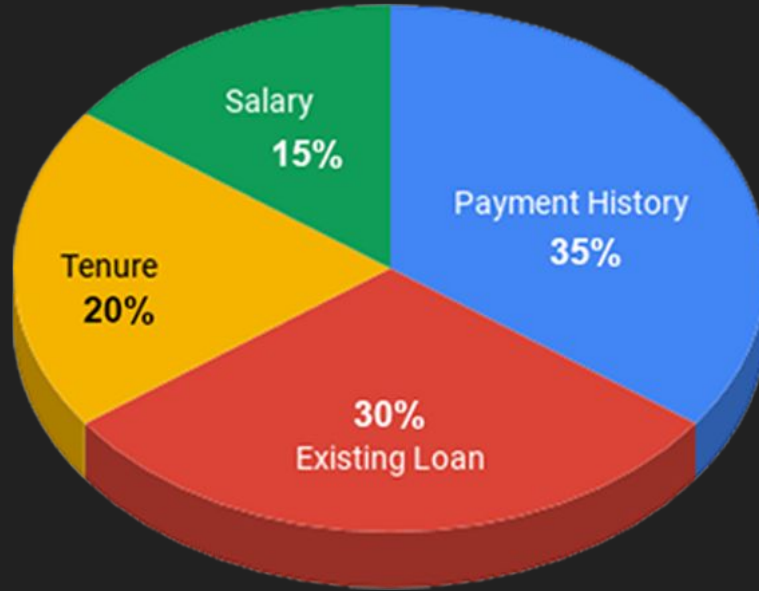
MAX SCORE = 850 PTS

**EXISTING LOAN SCORE =**  
TOTAL LOAN / ANNUAL SALARY

No Loan Records	0 pts
< 5%	255 pts
11% - 15%	235 pts
16% - 20%	210 pts
21% - 25%	200 pts
26% - 30%	180 pts
31% - 40%	150 pts
41% - 50%	120 pts
51% - 60%	100 pts
61% - 75%	85 pts
>75%	0 pts



# CREDIT SCORE FORMULATION

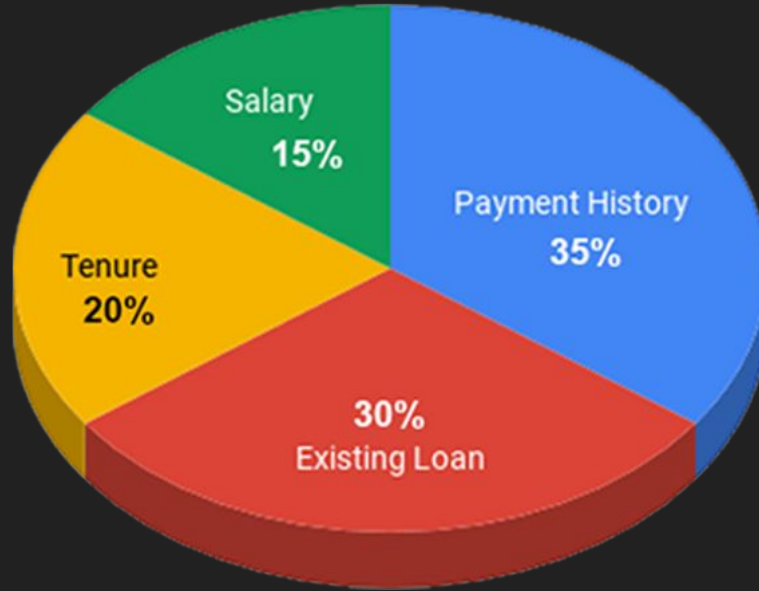


MAX SCORE = 850 PTS

## TENURE SCORE

< 1 year	0 pts
1 - 2 years	25 pts
3 - 4 years	75 pts
5 - 6 years	120 pts
7 - 8 years	150 pts
> 9 years	170 pts

# CREDIT SCORE FORMULATION

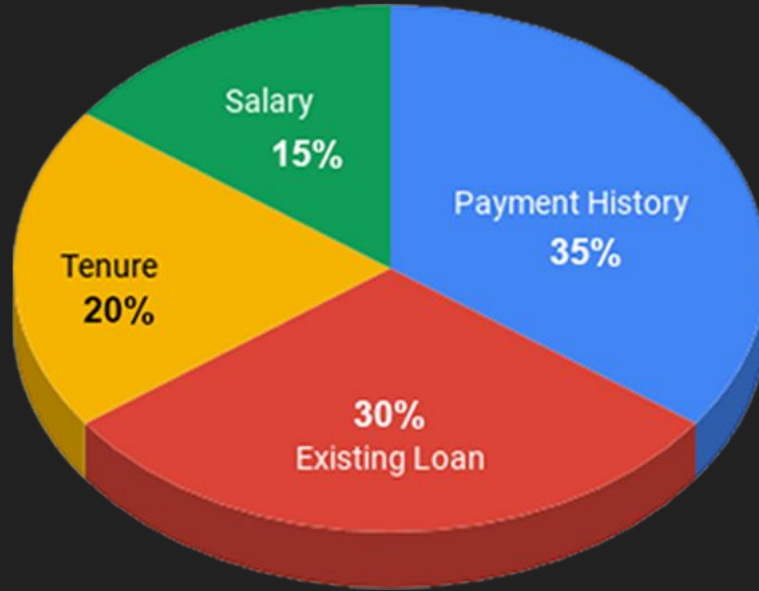


MAX SCORE = 850 PTS

## ANNUAL SALARY SCORE (IN PHILIPPINE PESOS)

<= 140,000 (Min Wage)	25 pts
140,001 - 200,000	60 pts
200,001 - 260,000	85 pts
260,001 - 320,000	100 pts
>320,000	125 pts

# CREDIT SCORE FORMULATION



MAX SCORE = 850 PTS

## CREDIT SCORE CLASSIFICATION

Less than 499	Very Poor
500 - 549	Poor
550 - 639	Fair
640 - 719	Good
More than 720	Excellent

# SHOP MODULE STRUCTURE

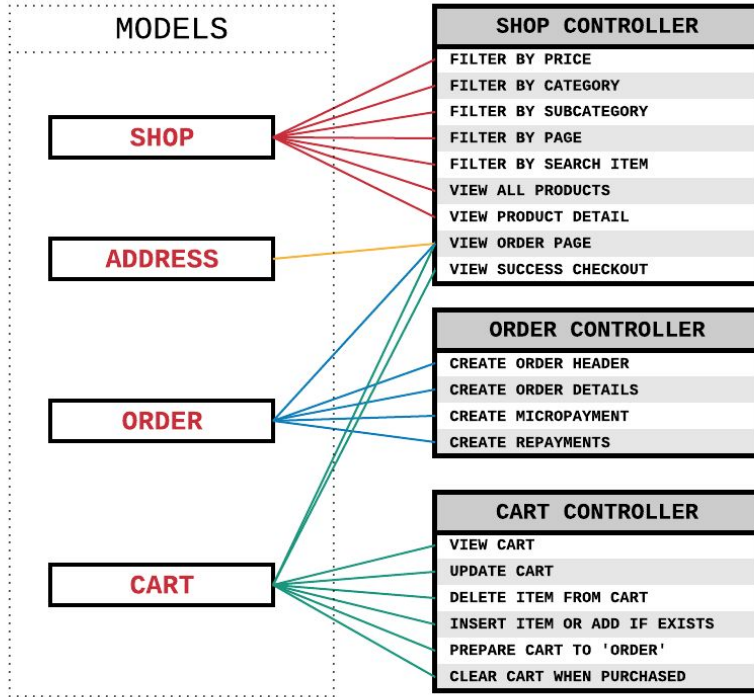



Chart on the left shows the interaction between the data models with the controllers. Notice that certain models are used in one controller.

# Product Categories



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POINTS 100 [redeem](#)

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CATEGORIES

APPLIANCES

CONSUMER ELECTRONICS

GROCERIES

HEALTH & BEAUTY

HOME AND LIVING

MEN'S FASHION

MOBILES AND TABLETS

MOVIES, BOOKS & MUSIC


SPORTS & TRAVEL

TOYS, KIDS & BABY


WOMEN'S FASHION

PRICE


₱49 - ₱46889




LEKANI Men fashion watches WHWD001-7 Band  
Color Black Color Black  
₱1145.00




Leetec baby Tiger stripes  
₱550.00




Prolink PMO 339N USB Retractable Optical  
Mouse  
₱281.09




Portable Nail Quick Dryer  
₱450.00




Elegant and Easy to Use Toothpaste Dispenser  
₱327.90







Transcend Micro SD Card 16GB Class 10  
₱357.82



Johnson's Baby Milk Soap 150g  
₱101.88



Apple iPad Mini 2 Wifi 16GB  
₱16300.00




# Show by Category

← → ↺

localhost:3000/shop/product\_categories/1

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MOVIES, BOOKS & MUSIC


SPORTS & TRAVEL

TOYS, KIDS & BABY


WOMEN'S FASHION

**PRICE**


₱49 - ₱46889




LEKANI Men fashion watches WHWD001-7 Band Color Black Color Black  
₱1145.00




Leetec baby Tiger stripes  
₱550.00




Prolink PMO 339N USB Retractable Optical Mouse  
₱281.09




Portable Nail Quick Dryer  
₱450.00




Elegant and Easy to Use Toothpaste Dispenser  
₱327.00







Transcend Micro SD Card 16GB Class 10  
₱357.82




Johnson's Baby Milk Soap 150g  
₱101.88



Apple iPad Mini 2 Wifi 16GB  
₱16300.00



# Show by Sub-Category



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Show All

Cooling & Heating

Kitchen Appliances

Large Appliances

Small Appliances

Small Kitchen Appliances

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GROCERIES

HEALTH & BEAUTY

HOME AND LIVING


MEN'S FASHION

MOBILES AND TABLETS


MOVIES, BOOKS & MUSIC

SPORTS & TRAVEL


Appliances




**Nikon Tough Mama Coffee Maker 1.8Liters Capacity Black NTMCM 660**  
₱700.00




**Westinghouse Citrus Juicer WKJM3321**  
₱1170.00




**Zoku Slush and Shake Maker**  
₱480.00




**10-inch Stainless Steel Egg and Cream Whisk Mixer**  
₱89.00




**12-inch Stainless Steel Egg Whisk Mixer**  
₱79.00



**Mini USB LED Luminous Humidifier**  
₱299.00



**Koli Power Juicer**  
₱1399.00



**Scarlette Induction Cooker**  
₱829.00

# Search by User Input

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WOMEN'S FASHION


PRICE

₱69 - ₱40240


Audio & Video




Genius Street Style Headphones GHP-400A  
₱617.00




Samwon Water Proof Bluetooth Speaker  
₱1968.80




Water Resistant Silicone Bluetooth Speaker  
₱437.00




SK S10 Rechargeable Bluetooth Wireless Mini Stereo Speaker  
₱349.00




Mini Jambox X3 Wireless Bluetooth Speaker with Mic  
₱299.00



S28 Portable Mini Metal Steel Bluetooth Wireless Speaker  
₱299.00




Basic Earbuds Headset with Volume Control  
₱89.00



Crystal Rose Portable Bluetooth Speaker FL 01  
₱379.00



# Filter Price



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SPORTS & TRAVEL

TOYS, KIDS & BABY

WOMEN'S FASHION

PRICE

₱79 - ₱7502

Update Filter

Appliances



Nikon Tough Mama Coffee Maker 1.8Liters Capacity Black NTMCM 660  
₱700.00



Westinghouse Citrus Juicer WKJM3321  
₱1170.00



Zoku Slush and Shake Maker  
₱480.00



10-inch Stainless Steel Egg and Cream Whisk Mixer  
₱89.00



12-inch Stainless Steel Egg Whisk Mixer  
₱70.00



Mini USB LED Luminous Humidifier  
₱299.00



Koi Power Juicer  
₱1399.00



Scarlette Induction Cooker  
₱829.00



Multi-functional Portable Mini Fan



Power Fruit Juicer 900W



Nutri Bullet (The world largest Juice Extractor)



Hetian Palm-sized travel steam iron CL-2588

# Pagination



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SCORE 100

POINTS 100

recovery

RAFFLE 100

convert

WALLET 1,000.00



Sunshine Tempered Glass for MYPHONE MY 96  
P169.00



Short Sleeve Collar Embroidered Stripe Dress  
P350.00



PINEAPPLE BLOUSE  
P630.00



Sunshine Tempered Glass for Vivo V5PLUS  
P250.00



Kenko Electronic Calculator CT-6513-120  
P299.00



Sunshine Tempered Glass for oppo r7  
P199.00



260PSI Auto Car Electric Tire Inflator Pump Air  
Pressure Gauge Compressor DC 12V  
**P539.00**



Sunshine Tempered Glass for oppo f1s  
P199.00



Women Top Lace Simple T Shirt  
P120.00



Sunshine Tempered Glass for oppo r1001  
P199.00



Sunshine TempeSred Glass for Vivo Y67  
**₱250.00**



Sunshine Tempered Glass for CHERRY ASTRO 2  
P199.00

# Add to Cart / Cart Display



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POINTS 100

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Filter Price: ₱19483 - ₱27621



Apple iPad Air 2 wifi 16gb  
₱22100.00



Apple iPad Air 2 wifi 64gb  
₱26120.15



Samsung Galaxy A7 16 gb Mobile Smart  
Phone  
₱21110.00



LG G4 32GB Single  
₱27392.75



Michael Kors Wyatt Silver-tone Stainless  
Steel Chronograph Watch MK5932  
₱24900.00



Michael Kors Parker Women's Silver  
Stainless Steel Watch MK6117  
₱24999.00



Michael Kors - Wyatt Silver-tone  
Stainless Steel Chronograph Watch  
MK5932  
₱24900.00



Michael Kors - Wyatt Silver-tone  
Stainless Steel Chronograph Watch  
MK5932  
₱24900.00

## PRICE

₱49 - ₱46889

# Checkout



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SCORE 100

POINTS 100

[redeem](#)

RAFFLE 100

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WALLET ₱1,000.00

## Shipping Address

Delivery Information: 3-7 Business days once in transit.

### My Addresses

☐ Andre Gunawan

83 Stark Court, Apt. 273, Roxas, Masbate, 2269

☐ Hansel Gunawan

215 San Vicente St, Binondo, Manila, Metro Manila, 1006

☐ William Tan

1535 Joshua Street Jordan Plaines, Novaliches, Quezon City, Metro Manila, 1122

[Use New Address](#)

### New Address

Full Name

Address Line 1

Street address, P.O. box, company name, c/o

Address Line 2

Apartment, suite , unit, building, floor, etc.

City / Province

Zip / Postal Code

### Order Summary

USB Data Line Charge Sync Cable Cord	x 1	₱ 81.00
--------------------------------------	-----	---------

Premium 3 USB Car Charge	x 1	₱ 129.00
--------------------------	-----	----------

Multi-functional Portable Mini Fan	x 1	₱ 89.00
------------------------------------	-----	---------

Nikon Tough Mama Coffee Maker	x 1	₱ 700.00
-------------------------------	-----	----------

Subtotal	₱ 999.00
----------	----------

Interest (2%)	₱ 19.98
---------------	---------

Grand Total	₱ 1,018.98
-------------	------------

[Place your order](#)

By placing your order, you agree to our [terms and conditions of use](#).

QUICK DEMONSTRATION

# FUTURE DEVELOPMENT

- Our deadline for this project is still in January -- and since their application is written in PHP, we have to convert our project from Node.JS to PHP.
- For the **product recommendation**, we decided to implement data science into the results (we already have the logic done on paper as of today, but we still need to test it for accuracy):
  - Product basket analysis (or product affinity analysis)
  - Demographic analysis
  - Page View analysis
  - Cart analysis

# TIPS AND TRICKS

- Instead of using callback functions in the model -- we use **Promises, Async and Await** -- which greatly organizes our code significantly.

```
view: (account_id) => {
  return new Promise ((resolve, reject) => {
    var q = `--YOUR QUERY HERE--`
    connection.query(q, (err, result) => {
      if (err) throw err;
      resolve(result);
    })
  })
},
exports.viewCart = async (req, res) => {
  var obj = {cart_content: await cart.view(1),
             cart_total: (await cart.total_cost(1))[0]}
  res.render("cart_display", obj);
};
```