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# UV M-Commerce Interface System Design

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# The Situation

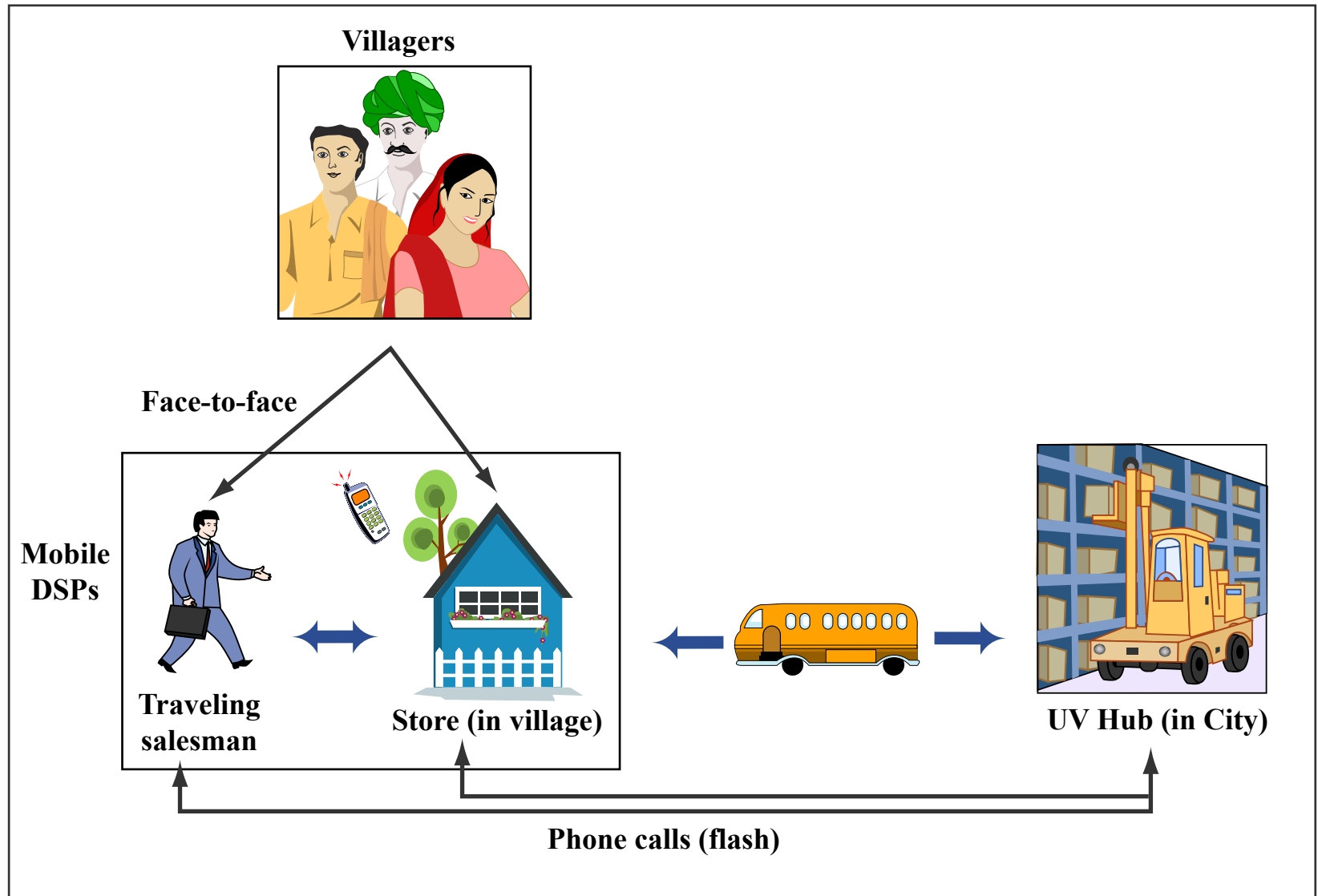


Figure by MIT OpenCourseWare.

# Feedback From United Villages

- We are not targeting the Villagers, we are targeting the shop owners and travelling salesmen
- UV wants a J2ME solution, no more voice phone calls!
  - Version 1, simple
    - Place order
    - Order confirmation/history
  - Version 2, advanced features
    - Registration of customers
    - Payment via pre-paid cards
    - Price negotiations
- UV wants 2 deliverables
  - J2ME solution, Version 0.8
  - Study of effectiveness of solution

# Feedback from United Villages

- Piloted an SMS ordering system
  - MDSPs willing to absorb cost of SMS
- It failed (call volume did not decrease):
  - Order products not in the catalog
  - Catalog does not have prices
  - Price negotiation
- (Will a J2ME implementation address these problems?)

# Changes to the Ordering System

- Add prices to Catalog
- Set policy for volume discounts
- Items numbers more phone-input friendly

# Technology Survey

- What type of devices are being used by the Mobile DakNet Service Providers (MDSPs)?
- 20 responses
  - 15 of 20 phones don't support J2ME!
  - 10 of 20 phones don't have color screens!
  - Maximum screen size is 176x200 pixels

# Solution

- Require the MDSPs to have a J2ME-enabled phone
- Currently deciding on suggested phone
  - MIDP 2.0
  - JSR 75 (persistent storage)
  - JSR 205 (Wireless messaging API 2.0)
  - Bluetooth for app install

# Needs Assessment

**United Villages Mobile DSP e-Shop Survey**

1. Village you serve? \_\_\_\_\_
2. When placing an order with United Villages e-Shop, do you order different products do you order per phone call? \_\_\_\_\_
3. Have you entered products using SMS (text message) from UV?
  - a. Yes (Please answer Question 4)
  - b. No
4. If you answered yes to the previous question, did you find SMS to use? Did you find it frustrating? Please comment on your experience.
 

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_
5. If you have used SMS to place an order from the e-Shop, did you call UV regarding the order?
  - a. Yes
  - b. No

- a. Why do you speak to an operator at UV e-Shop to place an order (instead of using SMS)? (Circle all that apply)
  - i. Ask for prices
  - ii. Negotiate prices
  - iii. Volume discount
  - iv. Order products not in catalogue
  - v. SMS takes too long
  - vi. Do not trust SMS
  - vii. I want to verify my order
  - viii. Cost of SMS
  - ix. Check on the status of an existing order
7. Have you installed any (Java) applications on your phone?
  - a. Yes
  - b. No
  - c. Do not know
8. Do you keep records of your orders or the orders you take?
  - a. Yes, I use written records
  - b. Yes, I use a computer for my records
  - c. No

We are considering the development of an application that will run on your mobile phone that will allow you to order from UV e-Shop. It will allow you to specify multiple products and a quantity for each product, and send the order via SMS (text message) to UV e-Shop. After the order is placed, verification will be sent to your phone and displayed by the application. Questions 9 and 10 refer to this application. Here is an example flow of the application:

Enter item number from catalog	Select quantity of product to order	Add more items?	Send order

9. If you were able to order using a system as described above, would you use it?
  - a. Yes
  - b. No
10. What do you think could prevent you from using the system? (Check all that apply)
  - a. Doesn't allow price negotiation
  - b. Too expensive (multiple SMS messages)
  - c. Time consuming
  - d. I feel more comfortable speaking with an operator
  - e. Other: \_\_\_\_\_
11. How would you improve on the proposed system? What features are missing? Please comment.
 

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_
12. We are considering a version of the e-Shop catalogue for your mobile phone. You would be able to search the catalogue on your phone, view the item description, item number and price. Pictures of the products could be displayed. If we developed this, would you use it?
  - a. Yes
  - b. No (Please answer Question 13)
13. If you answered no to the previous question, why would you not use the e-Shop catalogue on your mobile phone? (Check all that apply)
  - a. My phone screen is too small
  - b. Pictures don't look good on my mobile phone
  - c. Typing into my mobile phone is hard
  - d. I don't want to show customers my mobile phone
  - e. I don't use the paper catalogue
  - f. Cost, it is expensive to charge my phone
  - g. Cost, it is expensive to load applications on my phone
  - h. It would be too time-consuming, I prefer paper
  - i. Other: \_\_\_\_\_



# Needs Assessment

- 13 questions
- Questions focus on:
  - Why didn't you use/like the SMS ordering system?
  - Why do you speak with an operator at UV?
  - Would you use an application for ordering from the e-Shop?

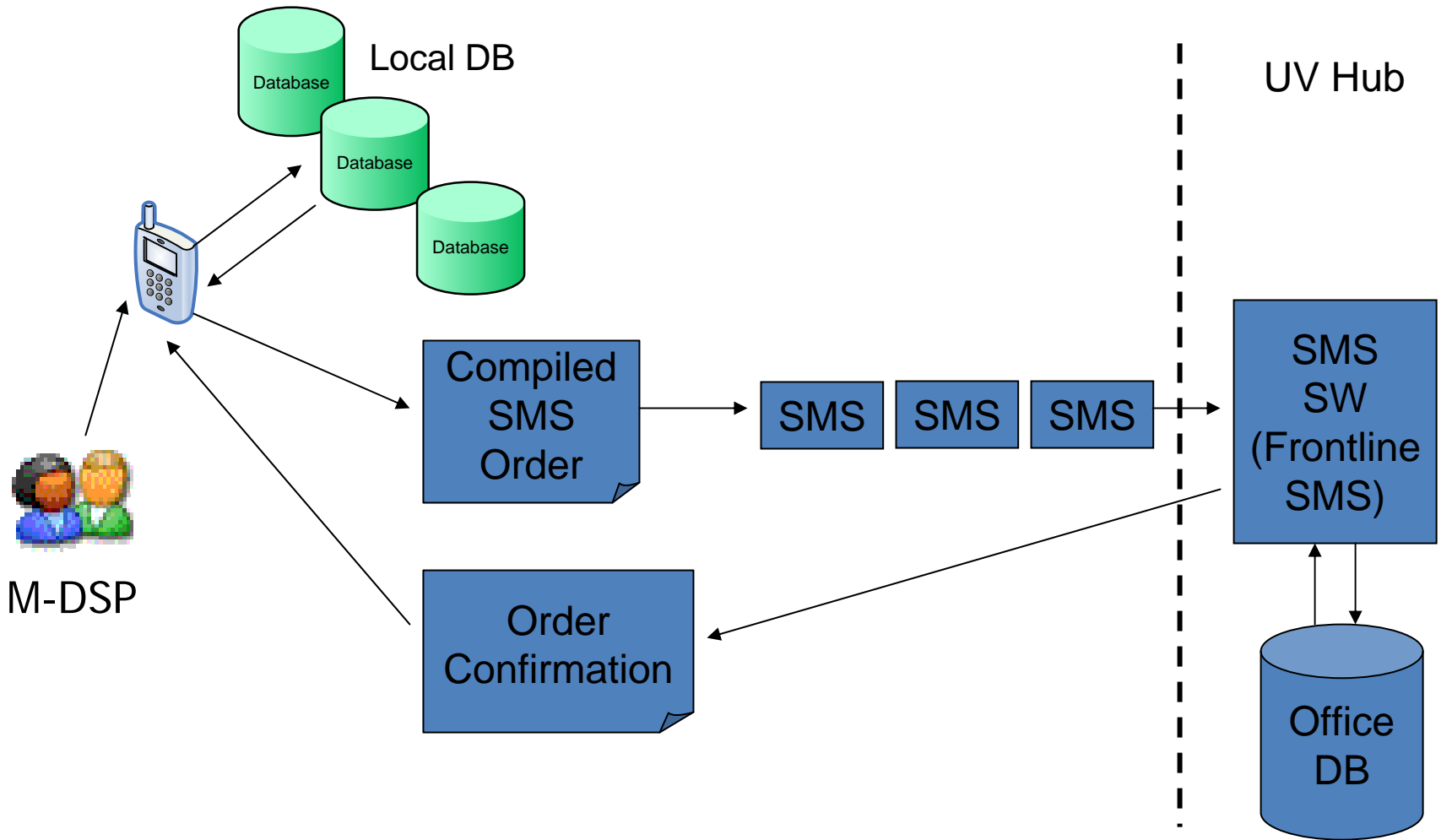
# Use Cases

1. MDSP orders product(s)
  - Searching for product(s)
  - Specifying quantity of each product
  - Receiving confirmation from UV hub
2. Check on status of order
3. MDSP checks his/her order history
  - Reorders
  - Check his/her profits

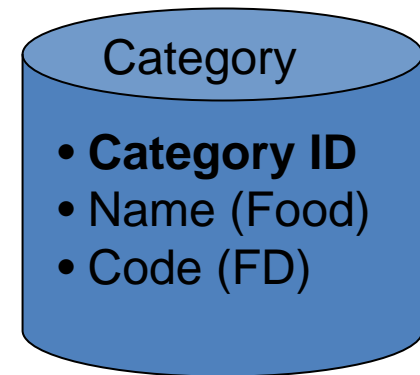
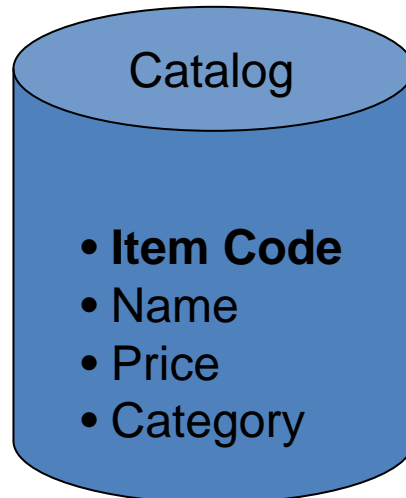
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# J2ME Proposed Design

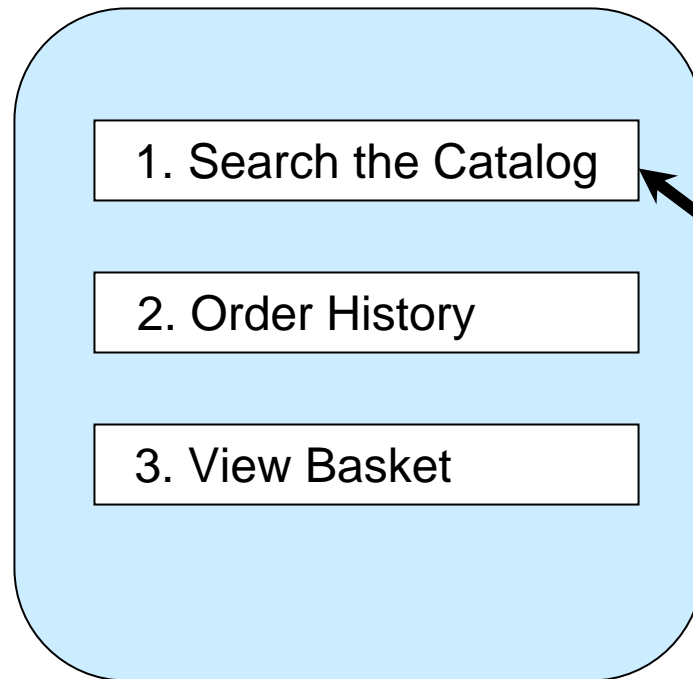
# System Diagram



# Databases

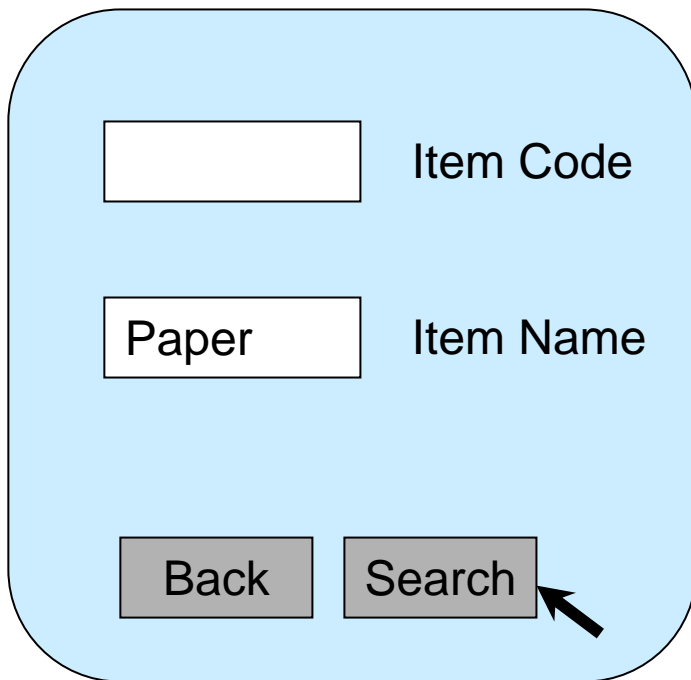


# User Interface Design



# Search the Catalog

## Menu

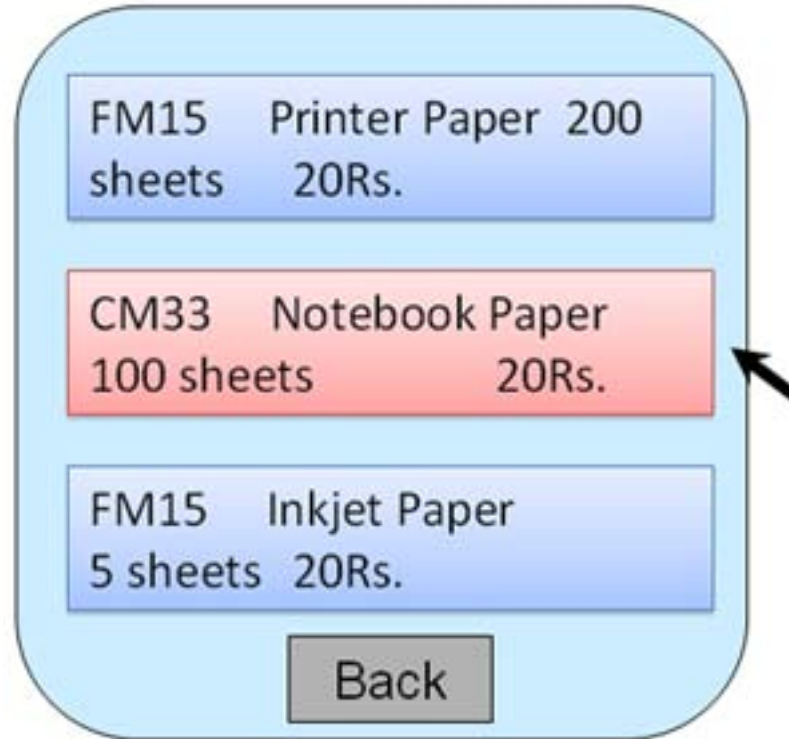


A screenshot of a search menu interface. It features a light blue rounded rectangular background. At the top left is an empty white input field labeled "Item Code". Below it is another white input field containing the text "Paper", labeled "Item Name". At the bottom left are two grey buttons: "Back" and "Search". A black arrow points to the "Search" button.

## Steps (Screens):

1. Search by item code, name
2. Browse Listings (name, price)
  - Select Item
3. Enter Quantity
  - show total price
4. Add to Basket

# Browse Listings





# Enter Quantity

CM33 Notebook Paper  
100 sheets 20Rs.

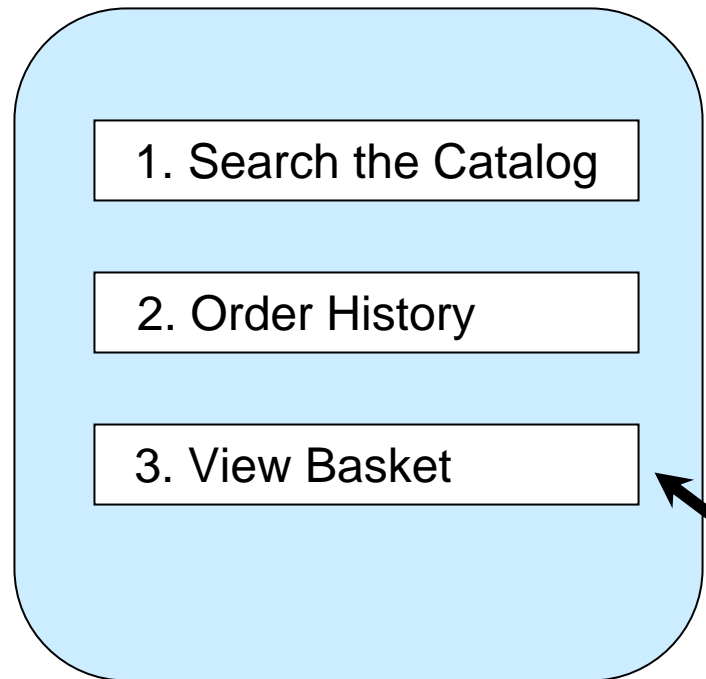
5 Quantity

100 Rs.

Back Done

# User Interface Design

- Top level Menu



# View Basket

## Menu

	Code	Name	Qty	Price
<input checked="" type="checkbox"/>	CM33	Paper	5	100
<input checked="" type="checkbox"/>	BO38	Book	5	2
				Total 125Rs.

## Steps:

1. Select/Deselect – add/remove
2. Check total price
3. Send

# Order Confirmation

## Order Confirmation

Your order number is O45

Done

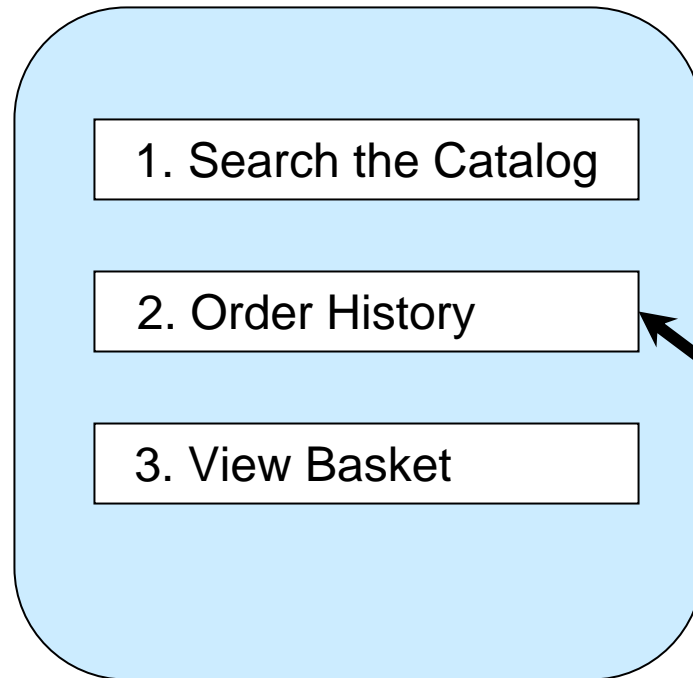
## Order Cancelled

There was something wrong with your order, a UV representative will call you shortly. Have a nice day.

Done

# User Interface Design

- Top level Menu



# Order History

## Menu

Time	Order#
17:23 10/21/2008	O45
11:21 10/20/2008	O44
10:12 10/19/2008	O43

Back

Code	Name	Qty	Price
CM33	Paper	5	100
BO38	Book	5	2

Total 125Rs.

Reorder Back

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