nearbuy.com
THE STEP-OUT APP

BUSINESS CASES FOR DATA ANALYTICS & SOLUTIONS

General Instructions

- There are a total of Three business cases, the candidate is expected to attempt all 11 questions
- Dummy data is provided wherever applicable, for any missing information, the candidate is free to make assumptions that are reasonably logical & coherent
- The answers to each of the questions should be written immediately after the particular question - the candidate is free to use any other accompanying visual tools such as tables or charts to explain his/her viewpoint
- The candidate is being tested primarily for his/her ability to frame hypotheses and put in place a logical process to solve the business problems
- Please save the document in .doc, .docx or .pdf format and the filename should be of the form - YourName_DAS_nearbuy

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Case #1 - Pizza on our mind

Joey's Pizza Corner (JPC) is a (hypothetical) national pizza chain that sells open vouchers on nearbuy.com. These open vouchers are equivalent to cash, come in a denomination of Rs. 1000/- and can be used in all online and offline JPC transactions.

Nearbuy.com buys vouchers in bulk from JPC at a cost of Rs. 800/- per voucher, paying them in advance and sells those vouchers to its customers at the given denomination.

To promote sales, nearbuy.com also offers savings to the customer in the form of either cashback (loyalty points returned to the customer in nearbuy currency) or upfront flat discounts

In the last 12 months, the number of vouchers sold on nearbuy.com and the corresponding savings offered, are as follows -

Month	Vouchers Sold	Saving Offered
Prev Month - 11	14,188	20% Discount
Prev Month - 10	11,801	20% Discount
Prev Month - 9	8,442	20% Cashback
Prev Month - 8	8,340	20% Cashback
Prev Month - 7	10,118	20% Cashback
Prev Month - 6	6,574	15% Cashback
Prev Month - 5	9,072	15% Cashback
Prev Month - 4	7,970	20% Cashback
Prev Month - 3	3,779	20% Cashback
Prev Month - 2	1,457	No Savings
Prev Month - 1	1,913	5% Cashback
Prev Month	1,968	5% Cashback

Due to budgetary constraints, the promotions were stopped three months ago and then brought back at a bare minimum level. The impact of reducing/removing promotional savings was observed in the voucher sales which dropped significantly.

Now, the company wishes to relaunch its savings program and go aggressive with it, the strategic options available include pure cashbacks or a mix of cashbacks and flat discounts.

However, the total cashback and discount on the voucher cannot exceed 40% of voucher value (translating to Rs. 400)

The company policy is that any cashback currency earned by the customer expires in a 30-day period, and returns to the company as breakage income. It has been observed that the % of currency expired differs from month to month in the range of 15-25 percent

Your task as an Analyst with the Data Analytics & Solutions team is the following -

1) Quantify the relationship between sales & savings offered and derive the strength of the relationship

2) Suggest a suitable saving % (cashback, discounts or both) to revive sales and predict the said growth
3) Predict the net revenue earned or lost by the company as a result of this program in the next quarter

4) Build a pricing/profitability calculator on Excel or Google Sheets that calculates the net revenue based on a few manual input values

CASE #2: The PVR Conundrum

A chunk of nearbuy.com's Movies & Events business is driven by sales of PVR open vouchers. These vouchers - usually in the denomination of Rs. 500 - are basically coupon codes that give a flat discount on any transaction on the PVR website or app.

The system is such that the purchase of the voucher & eventual booking of movie tickets happen on two different platforms with no linking between the two.

On an average, nearbuy sells 10X such vouchers in a month (and buys them in bulk from PVR @ INR X), offering an aggressive cashback of 50% on each of the vouchers. This was at one point, the highest cashback being offered on movie tickets across the industry.

However, despite such penetrative pricing, the business from PVR open voucher sales has failed to grow.

Only recently, PVR made an offer to help improve its voucher sales by giving nearbuy two alternatives:

Option - 1) After the end of every successful PVR voucher purchase, nearbuy customers will get to see a 'Book your tickets' button - clicking which will redirect the customer to the PVR website/app where he/she can carry on with the movie show booking process

This redirect option costs INR 5000X a year and has an upper cap of 10,000 transactions beyond which the amount has to be paid again.

Option - 2) Like on other booking platforms, PVR sells nearbuy its technology and allows for API integration to take place. As a result of this customers can purchase the voucher & book their seats on the nearbuy app itself in a seamless flow. But this integration has an annual cost of INR 38000X.

As the analyst asked to optimise for the best way forward, your task is to try and answer the following questions:

(Assume X to be any suitable integer)

1) List the possible reasons why the business might not have grown as rapidly as it should have despite the kind of pricing being offered?

2) Suggest possible ways to gather evidence/data to support the reasons listed above

3) What are the alternatives that the management can pursue apart from the two options that PVR has put forward

4) In the scenario that one strategy/alternative has to be implemented from a pool of many - what is the process that is going to be used to pick the best option

CASE #3: Are merchants pilfering?

The Spa & Salon category contributes to about 20% of the nearbuy business and is one of the prime verticals poised for enormous growth in the future. The customer journey for this category, is however, slightly different than other categories; customers generally call merchants to get a reservation for a suitable time-slot.

Being a primarily fixed-cost category (i.e. variable cost for serving each customer is low), the commission charged from our merchants is one of the highest across all categories i.e. merchants have a high incentive of not wanting to pay the commission.

As a result, merchants are likely to offer ‘offline-deals’ to customers when the latter call them for booking appointments - asking customers to get the same deal at nearbuy rates without having to book on nearbuy.

A dipstick analysis for a few merchants across various cities showed that most of such merchants are susceptible to such pilferage, leading to a massive opportunity cost in terms of lost business. The following need to be assessed:

1) What data points would help you analyse the size of the above problem?

2) What are the possible ways in which pilferage can happen? What is the contribution of each kind to the overall pilferage taking place?

3) Design solutions to counter the pilferage problem from the following perspectives:

i) Short-term Quick fixes (Stop-gap arrangement)

ii) Long-term solutions that will help help contain, if not eradicate, the above problem, that can be applied to other categories as well, if needed