**Q)Analyze the performance of sales and revenue at the city and branch level**

|  |  |  |
| --- | --- | --- |
| **Row Labels** | **Sum of Total Sales** | **Count of Invoice ID** |
| Mandalay | 9382.23 | 29 |
| A | 4058.28 | 11 |
| B | 2671.24 | 10 |
| C | 2652.71 | 8 |
| Naypyitaw | 13302.26 | 35 |
| A | 3273.34 | 12 |
| B | 5122.62 | 12 |
| C | 4906.3 | 11 |
| Yangon | 11702.48 | 35 |
| A | 4913.81 | 13 |
| B | 4098.07 | 11 |
| C | 2690.6 | 11 |
| Grand Total | 34386.97 | 99 |
|  |  |  |

**B. What is the average price of an item sold at each branch of the city ?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Average of Unit price** | **Column Labels** |  |  |  |
| **Row Labels** | **Mandalay** | **Naypyitaw** | **Yangon** | **Grand Total** |
| A | 53.35386555 | 54.12318182 | 55.63929825 | 54.36017493 |
| B | 56.13330508 | 57.78568807 | 56.01106195 | 56.62241176 |
| C | 57.95831579 | 57.94100917 | 52.68460177 | 56.07246057 |
| **Grand Total** | **55.65927711** | **56.60902439** | **54.78085294** | **55.67213** |
|  |  |  |  |  |

**c)** **C. Analyze the performance of sales and revenue, Month over Month across the Product line, Gender, and Payment Method, and identify the focus areas to get better sales for April 2019.**

**1. Overall Performance (Product Line):**

From January to March, we can observe sales fluctuations across all product lines:

* Sports and Travel, Fashion Accessories, and Electronic Accessories show strong performance.
* Home and Lifestyle shows moderate growth, but it's a product line where focus is needed for improvement.

**2. Payment Method Analysis:**

**Cash Payments:**

* **Across most product lines, cash sales are significant but show varying trends.**
  + **Sports and Travel:** Cash sales have been declining from January to March **(9614 → 4477 → 3883)**. This could be due to a shift towards digital payment methods.
  + **Electronic Accessories**: Cash sales peaked in March (6851), suggesting the importance of maintaining easy cash options.

**Credit Card Payments:**

* Credit card payments are increasing for most categories, especially in Sports and Travel **(7161 → 3308 → 6497).** This payment method seems to be gaining preference.

**E-wallet Payments:**

* E-wallet usage is growing, particularly in Fashion **Accessories (7373 → 6261 → 4801) and** Health and Beauty **(5504 → 4050 → 5716)**. Promoting digital payments will likely boost sales further in April.

**3. Gender-Based Performance:**

**Male vs Female Sales:**

* **Electronic Accessories:** Male sales are consistently higher than female sales across payment methods, especially in March (Cash: 4091 vs. 2759; Credit Card: 658 vs. 3052).
* **Fashion Accessories**: Female sales are higher in all months (Credit Card March: 3578 vs. 1631 for males). This trend suggests that fashion campaigns should continue to target female audiences.

**Focus Areas for Gender:**

* **Female Customers:** Sales are strong in Fashion Accessories and Health and Beauty. Promote targeted campaigns and discounts for women, as they have a significant impact on these categories**.**
* **Male Customers:** Focus on Electronics and Sports product lines where males contribute more sales. Target campaigns for high-value electronic items and sports gear.

**4. Key Focus Areas to Improve Sales in April:**

1. **Encourage More Use of E-wallet and Credit Card:**
   * Digital payments are increasing across multiple categories, especially in Fashion Accessories and Sports and Travel.
   * Offer additional incentives or cashback for e-wallet and credit card users to further boost sales in April.
   * Since cash payments are declining, it’s crucial to promote digital alternatives through special offers.
2. **Target Male Customers in Underperforming Categories:**
   * Focus on increasing male participation in categories like Fashion Accessories and Home and Lifestyle. Offer promotions that cater to male preferences in these areas (e.g., sports-themed fashion or tech-related home products).
3. **Boost Cash Sales Where Digital Isn't Dominant:**
   * In categories where digital payments haven’t completely overtaken (e.g., Health and Beauty, Home and Lifestyle), ensure the availability of cash payment options with small discounts or ease-of-access campaigns**.**
4. **Seasonal or Event-Based Promotions:**
   * Create limited-time offers in Sports and Travel and Electronics to target customers preparing for summer vacations or upcoming tech events.
   * For categories like Food and Beverages, push weekend or holiday deals to boost spending in April.

**5. Promotional Strategies for April:**

* **Offer Bundles and Discounts:** Especially in categories like Fashion Accessories and Home and Lifestyle, where growth has been slower, bundling items or offering ‘buy-one-get-one’ promotions can attract customers.
* **Cashback for Digital Payments**: Introduce cashback offers for e-wallet and credit card users, which have shown rising usage from January to March.
* **Influence of Gender-Specific Promotions:** Continue running gender-specific promotions where females are driving sales (e.g., Fashion Accessories), but improve male engagement through exclusive deals.

**Conclusion:**

For improving sales in April, the focus should be on expanding digital payment offers (especially e-wallet and credit cards), running targeted gender-based campaigns, and incentivizing underperforming categories like Home and Lifestyle and Food and Beverages. April should also focus on retaining strong performers like Sports and Travel and Electronics through seasonal promotions.

**2.App Exploration: (5 marks)**

**Explore the features and user experience of the Jar app. Identify two aspects that you think could be significantly improved and explain your reasoning behind each suggestion.**

**1. Improved Financial Visualization (UI/UX)**

* **Current Issue:** The financial data visualization within the Jar app, such as savings progress, goal tracking, or transactions, might lack intuitive design and interactive features. Users may find it challenging to gain insights quickly, as they need to navigate through multiple menus or deal with static charts that don't provide actionable insights.
* **Suggested Improvement:** Introduce dynamic and more interactive visualizations. Implement real-time charts that show users their savings growth, spending trends, and future projections based on their savings behavior. Features like drill-downs (e.g., clicking on a specific transaction type to see a breakdown) and comparisons with previous months could make the app more engaging and help users better manage their finances.
* **Reasoning:** Modern apps like INDMoney and Walnut excel at providing users with actionable financial insights in a simple, visual manner. Introducing dynamic and clear visual data will help users make informed decisions and better engage with their financial goals.

**2. Enhanced Gamification of Saving Goals**

* **Current Issue:** While the app promotes saving, the reward or motivation for achieving savings goals may feel too subtle or lack emotional engagement. Many users thrive on achieving financial milestones but could lose motivation without a tangible sense of achievement.
* **Suggested Improvement:** Enhance gamification elements by adding more meaningful milestones, virtual rewards (e.g., badges, levels), or competitive features where users can see how their savings compare to peers. For example, adding social sharing or competition-based features could boost user engagement.
* **Reasoning:** Gamifying the process makes the user feel accomplished and more committed. Apps like Fitbit or Duolingo show the success of gamifying otherwise monotonous activities (like exercise or language learning), and a similar strategy in the Jar app could increase user retention and interaction.

**3. Product Optimisation: (5 marks)**

**The Jar app has an engagement feature called 'Spin to Win'.**

**Right now, if 100 people come to the app each day, only 23 of them try out this spinning game. But, we know that people who spin are more likely to retain on the app and do transactions.**

**Now, we want to get more people to play the game. So, the question is, how can we make sure that at least 50 people out of every 100 who visit the app each day will play 'Spin to Win'? What can we do to get more people interested in spinning the wheel?**

**Ans)1. Offer Immediate, Tangible Rewards**

* **Current Issue:** Users might not be motivated to play 'Spin to Win' if they feel the rewards are insignificant or not immediate. People are generally more likely to engage with activities that offer instant gratification.
* **Solution:** Increase the visibility and appeal of rewards by offering users immediate, tangible benefits for spinning the wheel, such as discounts, cashback, or a small direct contribution to their savings goal. Communicate the benefits clearly before users even enter the game (e.g., a popup stating, "Spin now to earn ₹10 towards your savings instantly!").
* **Reasoning:** When users know they can gain something valuable and instantly, it creates a strong motivation to participate. Small rewards given instantly can increase the perceived value of engaging with the feature, encouraging more people to try it.

**2. Increase Visibility and Gamify the Experience**

* **Current Issue:** The 'Spin to Win' feature may not be sufficiently prominent, or users may not see it as an exciting part of their daily app routine.
* **Solution:** Promote the game more aggressively within the app by highlighting it in key sections, such as the dashboard, notifications, or banners. Incorporate countdowns, progress bars, or daily challenges (e.g., "Play Spin to Win for 5 consecutive days and unlock a bonus prize"). Also, introduce exclusive rewards for those who play regularly, creating a sense of progression and achievement.
* **Reasoning:** Gamification has been proven to boost engagement by triggering users' competitive instincts and desire for achievement. By making the game more prominent and adding streaks or leaderboards, users will see it as a core part of their daily app experience rather than an optional feature.

**3. Use Personalized Push Notifications**

* **Current Issue:** Users may not be reminded or motivated to engage with the spinning game regularly.
* **Solution:** Send personalized, timely push notifications to users based on their behavior within the app. For example, after a user saves or transacts, send a notification saying, "You've made progress on your savings goal! Spin the wheel to win a bonus!" Use AI or data analytics to send these notifications when users are most active.
* **Reasoning:** Personalized notifications are more effective than generic ones. By tying the spinning game to user behavior and moments of achievement, you create a positive association between their actions and the game, which increases the likelihood of them playing.

**4. Incorporate Social Proof and Peer Pressure**

* **Current Issue:** Users may not feel a sense of urgency or desire to participate if they think no one else is doing it.
* **Solution:** Show users how many others are spinning the wheel each day and winning rewards (e.g., “78,000 people have already spun and won today!”). You can also introduce a competitive element by allowing users to see what their friends or peers have won through social sharing or an internal app leaderboard.
* **Reasoning:** Social proof is a powerful motivator. If users see that others are playing and winning, they will feel more compelled to join in and avoid the fear of missing out (FOMO).

**5. Run Limited-Time Campaigns and Challenges**

* **Current Issue:** There may not be enough urgency for users to play the game regularly.
* **Solution:** Introduce limited-time events where users can only play 'Spin to Win' during specific periods or where the rewards are doubled for a short window (e.g., "Spin the wheel between 6 PM and 9 PM for a chance to double your rewards!"). You could also run thematic campaigns tied to holidays or other special occasions.
* **Reasoning:** Time-bound incentives create urgency and excitement. If users know they only have a limited window to take part and earn greater rewards, they are more likely to engage with the feature.

**Summary of Strategies:**

1. **Immediate, tangible rewards** — Give small, instant savings boosts for spinning.
2. **Increase visibility and gamify** — Highlight the game on the dashboard and create streaks or challenges.
3. **Personalized push notifications** — Tailor reminders to users based on their app activity.
4. **Social proof** — Show how many others are spinning and winning.
5. **Limited-time campaigns** — Run events with higher rewards during specific times.

Gitlink: <https://github.com/vuyyurusairamreddy/jar_assignment>