MUZICAL Ad PRICING

INTRODUCTION

Determining the ad pricing for Muzical, a newly launched music streaming service that generates revenue through advertisements. Muzical aims to maintain a 100% operating margin, meaning the ad revenue should be twice the monthly licensing costs. The project also includes recommendations to increase the percentage of ad slots purchased by advertisers.

METHODOLOGY

1. **Estimate Total Ad Slots per Month:**
   - Determine the average number of songs played per user per month (SSS).
   - Multiply SSS by the number of active users (UUU) to get the total number of songs played.
   - Each song corresponds to one ad, so total ads = S×US \times US×U.
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2. **Split Ads into Peak and Off-Peak Categories:**
   - Let rrr represent the percentage of total ads played during peak time.
   - Peak ads = r × total adsr \times \text{total ads}r×total ads.
   - Off-peak ads = (1−r)×total ads(1 - r) \times \text{total ads}(1−r)×total ads.
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3. **Set Revenue Equation:**
   - Total revenue from ads = (Peak ads × P) + (Off-peak ads × O) (\text{Peak ads} \times P) + {Off-peak ads} \times O)(Peak ads×P)+(Off-peak ads×O).
   - Substituting P=2OP = 2OP=2O:
     Total revenue=(Peak ads×2O)+(Off-peak ads×O)\text{Total revenue} = (\text{Peak ads} \times 2O) + (\text{Off-peak ads} \times O)Total revenue=(Peak ads×2O)+(Off-peak ads×O)

- o Simplify: Total revenue=O×(Peak ads×2+Off-peak ads)\text{Total revenue} = O \times (\text{Peak ads} \times 2 + \text{Off-peak ads})Total revenue=O×(Peak ads×2+Off-peak ads)

4. **Set Revenue Target:**
   - o Total revenue should equal 2L2L2L: O×(Peak ads×2+Off-peak ads)=2LO \times (\text{Peak ads} \times 2 + \text{Off-peak ads}) = 2LO×(Peak ads×2+Off-peak ads)=2L

5. **Solve for OOO (Off-Peak Price):**
   - o Rearrange to find OOO: O=2L(Peak ads×2+Off-peak ads)O = \frac{2L}{(\text{Peak ads} \times 2 + \text{Off-peak ads})}O=(Peak ads×2+Off-peak ads)2L

6. **Calculate Peak Price PPP:**
   - o Use P=2OP = 2OP=2O.

QUESTIONS AND ANSWERS

1. **What is Muzical's monthly licensing cost ?**
   - o Answer: L=$1,000,000L = $1,000,000L=$1,000,000 (Assume for calculation purposes unless specified otherwise).

2. **Does Muzical have any additional operational costs that should be factored in for ad pricing?**
   - o Answer: "I don't know." (Assume there are no additional costs unless specified).

3. **Is the goal strictly a 100% operating margin? Or should we aim for more flexibility in the margin?**
   - o Answer: The goal is strictly a 100% operating margin.

4. **How many active users does Muzical currently have per month?**
   - o Answer: 10,000,000 users.

5. **What is the average number of songs played per user per month?)?**
   - o Answer: 200 songs per user.