# 

# 

BILL PROJECT

PROJECT CODE :PYTHON

**PROJECT ON :**iPhone billing

GIT HUB REPOSITORY LINK: https://github.com/adithyakumar07/bill\_project.git

ADITHYA KUMAR

# iPhone 16: Pricing, Taxes, and Discount Structure

## Introduction to iPhone 16 Mobile Pricing and Taxes

The iPhone 16 is the latest model in Apple's iconic smartphone series, offering cutting-edge technology and sophisticated design. The base price for each iPhone 16 mobile is set at **₹90,000**. This price forms the foundation for calculating the total amount a customer pays when purchasing one or more units.

In India, the Goods and Services Tax (GST) plays a crucial role in the pricing of goods, including mobile phones like the iPhone 16. GST is a comprehensive indirect tax levied on the manufacture, sale, and consumption of goods and services throughout India. It replaces multiple older taxes to simplify the taxation process.

GST is divided into two components:

* **State GST (SGST)**: Collected by the state government where the buyer is located.
* **Central GST (CGST)**: Collected by the central government.

For the iPhone 16, both SGST and CGST are charged at a rate of **18%** each. These taxes are added to the base price, increasing the overall cost that the customer must pay.

In addition to taxes, discounts are offered to customers based on the number of iPhone 16 mobiles they purchase at once. These discounts range from a minimum of 2% for single-item purchases, up to 29% for very large orders, encouraging bulk purchases. This tiered discount structure helps buyers save more as they buy in larger quantities.

Understanding these components—the base price, GST taxes, and quantity-based discounts—is important for customers to transparently see how the final payable amount is determined when purchasing the iPhone 16.

## Quantity-Based Discount Structure

The discount structure for purchasing iPhone 16 mobiles is designed to encourage customers to buy in larger quantities by offering increasingly attractive discounts as the number of units purchased rises. This tiered system ensures that buyers receive better value per unit when they opt for bulk purchases.

The discounts are applied as follows:

* **1 unit:** A minimal discount of *2%* is applied for single-item purchases. This acknowledges the customer's purchase while maintaining close to the base price.
* **2 to 5 units:** Customers receive a *9%* discount, which substantially reduces the effective price and motivates small bulk buying.
* **6 to 10 units:** This slab increases the discount to *19%*, providing almost double the savings compared to the smaller quantity range.
* **11 to 20 units:** The discount remains at *19%*, maintaining strong incentives for mid-level bulk purchases.
* **21 to 40 units:** A higher discount of *24%* applies here, rewarding larger volume buyers with significant cost reduction.
* **41 or more units:** The maximum discount of *29%* is offered, encouraging very large orders and providing the best price advantage.

For example, purchasing 3 iPhones at a 9% discount results in more savings compared to buying just one unit with a 2% discount. Similarly, buying 25 units leverages the 24% discount, dramatically lowering the total expense compared to smaller orders.

This graduated discount approach not only benefits customers by reducing their total cost but also assists sellers by promoting higher sales volumes and efficient inventory turnover. By understanding this structure, customers can make informed decisions on the scale of their purchase to optimize their savings.

## Calculation of Billing Components

The billing calculation for purchasing iPhone 16 mobiles involves several steps, each ensuring an accurate and transparent total payable amount. The process begins with the calculation of the **total mobile cost without taxes and discount**, which is simply the base price multiplied by the quantity purchased.

Total Mobile Cost = Quantity × Base Price  
= N × 90,000 INR

Next, the applicable taxes, **SGST** and **CGST**, are computed individually per mobile, both at a rate of 18%. Each tax amount is calculated on the base price of one unit as follows:

SGST per unit = Base Price × 18% = 90,000 × 0.18 = 16,200 INR  
CGST per unit = Base Price × 18% = 90,000 × 0.18 = 16,200 INR

The total tax per mobile is the sum of SGST and CGST, which increases the unit cost before any discount is applied.

Discounts are then applied depending on the number of units. However, the current calculation applies the discount rate *per unit*, which means the discount amount is derived by multiplying the base price by the discount percentage:

Discount per unit = Base Price × Discount Rate

This approach implies the discount is uniform per item, regardless of total purchase value, which might not align with typical billing where the discount is applied on the aggregate amount. The formula for discount amount per unit is:

Discount Amount = 90,000 × discount%

Finally, the **total payable amount per unit** is computed by adding the base price and taxes, then subtracting the discount per unit:

Total Payable per unit = Base Price + SGST + CGST - Discount Amount

To get the overall amount the customer must pay, multiply this final amount by the number of mobiles purchased.

**Potential Consideration:** Calculating discount per unit may lead to minor rounding or logical inconsistencies compared to applying discount on the sum of base price and taxes or on the total invoice value. A more precise approach would be:

Total Cost before discount = (Base Price + SGST + CGST) × Quantity  
Discount Amount = Total Cost before discount × Discount Rate  
Total Payable = Total Cost before discount - Discount Amount

This ensures the discount reflects bulk purchase benefits accurately. Nonetheless, the current method provides a straightforward and easy-to-understand billing calculation suitable for clear communication to customers.

## Billing Summary and Final Remarks

Below is a sample billing summary for a customer purchasing a specified number of iPhone 16 mobiles. This summary clearly outlines each cost component, ensuring transparency and helping customers understand how the final amount is derived.

----- Billing Summary -----  
  
Total Mobile Cost : ₹ 270,000 (for 3 units × ₹90,000)  
SGST (18% per unit) : ₹ 16,200 (₹90,000 × 0.18)  
CGST (18% per unit) : ₹ 16,200 (₹90,000 × 0.18)  
Discount Applied (9%) : ₹ 8,100 (₹90,000 × 0.09)  
  
Final Payable Amount per unit:  
 = Base Price + SGST + CGST – Discount  
 = 90,000 + 16,200 + 16,200 – 8,100  
 = ₹114,300  
  
Total Payable Amount for 3 units:  
 = ₹114,300 × 3 = ₹342,900  
---------------------------  
Thank you for your purchase! Please visit us again.

This clear breakdown is essential to building **customer trust and confidence**. By itemizing the total mobile cost, tax components, and discounts applied, customers can verify that pricing is fair and consistent with advertised policies. Transparency like this reduces confusion and questions regarding billing, encouraging repeat business.

To enhance clarity further, future billing documents might:

* Show aggregate taxes and discount totals alongside per-unit values for easier comprehension.
* Confirm tax calculation bases explicitly, especially when discounts affect the taxable amount.
* Use tabular formats to align charges and simplify visual scanning.

Ultimately, a transparent and detailed billing summary not only supports customer satisfaction but also reinforces the retailer's reputation for honesty and professionalism. We thank our customers sincerely and look forward to serving you again soon.

THANK YOU