

### Problem Statement:

You have been hired to create a Java program that can calculate the price of a product based on certain criteria. The product has a base price and can have various discounts applied based on certain conditions. Your task is to create a Java program that implements the following requirements:

1. The program must take input from the user in the form of the base price of the product.
2. The program must be able to calculate the final price of the product after all discounts have been applied.
3. The program must apply the following discounts in the order given: a. If the base price is greater than \$100, apply a discount of 10%. b. If the base price is greater than \$500, apply an additional discount of 20%. c. If the base price is greater than \$1000, apply an additional discount of 30%. d. If the base price is greater than \$5000, apply an additional discount of 40%.
4. The program must display the final price of the product after all discounts have been applied.

You need to implement the following method:

1. **calculateFinalPrice(double basePrice)** - This method should take the base price of the product as input and return the final price after all discounts have been applied.

Your Java program should have a main method that takes user input for the base price and calls the **calculateFinalPrice** method to calculate the final price of the product. The program should display the final price of the product after all discounts have been applied.

Example:

Suppose the user inputs a base price of \$2000. The program should apply a 10% discount (\$200) for the base price being greater than \$1000, and an additional 30% discount (\$540) for the base price being greater than \$5000. The final price of the product should be \$1260 (\$2000 - \$200 - \$540).

Note: The discount percentages and criteria are just examples and can be modified based on the requirements of the program.