Assignment Grading Criteria

Your project will be evaluated based on the following components. Please make sure each is properly addressed to receive full credit:

1. Product Class

- A `Product` class must be created with the following properties:
    - `productId` (int)
    - `productName` (String)
    - `productCost` (double)
- Include appropriate behaviors:
    - A constructor to initialize product data.
    - A `toString()` method to print product details in a readable format.

2. VendingMachine Class & Main Method

- You must have a `VendingMachine` class that contains the `main(String[] args)` method where the program starts.
- This class should manage vending machine operations, including loading products, handling user interaction, and generating receipts.

3. Array of Product Objects

- Create an array of type `Product` with **10 slots**.
- Initialize and store **at least 10 different product instances** in the array.

4. Repeated Purchase Loop

- Implement a **loop** that allows users to:
    - View products
    - Select and purchase products multiple times

        - Choose when to exit/cancel

5. Clear and Detailed Prompts

- Your program must:
    - Display a welcoming message
    - Provide clear prompts for product selection, quantity input, and exiting
    - Help the user understand how to interact with the vending machine

6. Cancel Option at Any Time

- Allow the user to **exit or cancel the transaction** at any point using a special option (e.g., entering `0`).
- Upon canceling, display a **summary/receipt** if any purchase has been made.

7. Input Validation and Error Handling

- Use `try-catch` blocks to prevent the program from crashing if:
    - A user inputs letters instead of numbers
    - An invalid product ID or quantity is entered
- Your program should continue running after an error is caught.

8. Receipt Formatting

- After the user exits:
    - Print a receipt showing:
        - Number of items purchased
        - Total amount spent (formatted with **GMD** and **2 decimal places**)
        - Date and time of transaction
- The output should look clean and professional.

9. Code Review and Documentation

- Include comments explaining each major block of your code.
- Be ready to explain:
    - What each method or section does
    - Why you structured it that way
    - How your loop, array, and exception handling work