JavaScript Exercises: Product Data Modeling

1. Find a Product by ID
Write a program that takes a product ID and prints the product object.

Output:

```
{
 "id": 102,
 "title": "Mobile",
 "varations": [...],
 "reviews": [...]
}
```

2. List All Product Titles
Write a program that prints all product titles.

Output:

Sony LED 40 inch
Mobile
Bike

3. Find Available Colors of a Product
Given a product ID, print all available colors.

Output:

black
red
silver

4. Get Total Quantity of a Product
Write a program that calculates and prints the total quantity of all variations of a given product.

Output:

Total Quantity: 14

5. Filter Products with Low Stock

Write a program that prints products where at least one variation has a quantity of less than 2

Output:

Sony LED 40 inch
Mobile
Bike

6. Find the Highest Rated Product

Write a program that prints the product with the highest average rating.

Output:

Highest Rated Product: Mobile

7. Filter Active Reviews for a Product

Modify the given logic to display only approved (status: true) reviews.

Output:

{"user": "Ahmad", "rating": 4.0, ...}
{"user": "Ali", "rating": 5.0, ...}

8. Find the Most Expensive Variation of Each Product

Write a program that prints the most expensive variation for each product.

Output:

Product 101 = Sony LED 40 inch - Silver (55000)
Product 102 = Mobile - Silver (55000)
Product 103 = Bike - Black (55000)

9. Calculate Total Stock Value

Calculate and print the total value of all products in stock (sum of price * quantity for all variations).

Output:

Total Stock Value: 1020000