This homework will give you practice using switch statements and arithmetic operations.

Write a complete Java program to create a simple calculator program. To begin, prompt the user to input two numbers:

Enter first number: 2.5
Enter second number: 3

Then, display a menu of the following mathematical operations:

- **Addition (+)**
- **Subtraction (-)**
- **Multiplication (*)**
- **Division (/)**
- **Modulus (%)**
- **Exponent (^)**

Take user input to select an operation option.

Operation: *

Use the switch statement to perform the selected mathematical operation and compute the result. (Remember to include a default case to handle invalid operation options and display an appropriate error message.)

Lastly, print out the result of the operation:

Result: 7.5

Execute the program and test different arithmetic operations to ensure its correctness.