Problem Statement:

You have been hired as a developer to create a program that can solve a mathematical puzzle. 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 two integers, a and b.
2. The program must find the sum of all the numbers between a and b, inclusive.
3. The program must find the product of all the numbers between a and b, inclusive.
4. The program must find the sum of all the even numbers between a and b, inclusive.
5. The program must find the sum of all the odd numbers between a and b, inclusive.

You need to implement the following methods:

1. **getSum(int a, int b)** - This method should find the sum of all the numbers between a and b, inclusive, and return it as an integer.
2. **getProduct(int a, int b)** - This method should find the product of all the numbers between a and b, inclusive, and return it as an integer.
3. **getSumOfEvens(int a, int b)** - This method should find the sum of all the even numbers between a and b, inclusive, and return it as an integer.
4. **getSumOfOdds(int a, int b)** - This method should find the sum of all the odd numbers between a and b, inclusive, and return it as an integer.

Your Java program should have a main method that takes user input and calls the above methods to perform the required operations. The program should display the results of all the operations performed.

Note that you should handle cases where a and b are negative or where a is greater than b. In these cases, you should display an appropriate error message to the user.