```java
import java.util.Scanner;

public class BasicCalculator {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.println("Welcome to the Basic Calculator!");
        System.out.println("Choose an operation:");
        System.out.println("1. Addition (+)");
        System.out.println("2. Subtraction (-)");
        System.out.println("3. Multiplication (*)");
        System.out.println("4. Division (/)");
        System.out.println("5. Exit");

        while (true) {
            System.out.print("\nEnter your choice (1-5): ");
            int choice = scanner.nextInt();

            if (choice == 5) {
                System.out.println("Exiting the calculator. Goodbye!");
                break;
            }

            if (choice < 1 || choice > 5) {
                System.out.println("Invalid choice! Please try again.");
                continue;
            }

            System.out.print("Enter the first number: ");
            double num1 = scanner.nextDouble();

            System.out.print("Enter the second number: ");
            double num2 = scanner.nextDouble();

            switch (choice) {
                case 1:
                    System.out.println("Result: " + (num1 + num2));
                    break;
                case 2:
                    System.out.println("Result: " + (num1 - num2));
                    break;
                case 3:
                    System.out.println("Result: " + (num1 * num2));
                    break;
                case 4:
                    if (num2 != 0) {
                        System.out.println("Result: " + (num1 / num2));
                    } else {
                        System.out.println("Error: Division by zero is not allowed.");
                    }
                    break;
            }
        }

        scanner.close();
```

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    }
}
```