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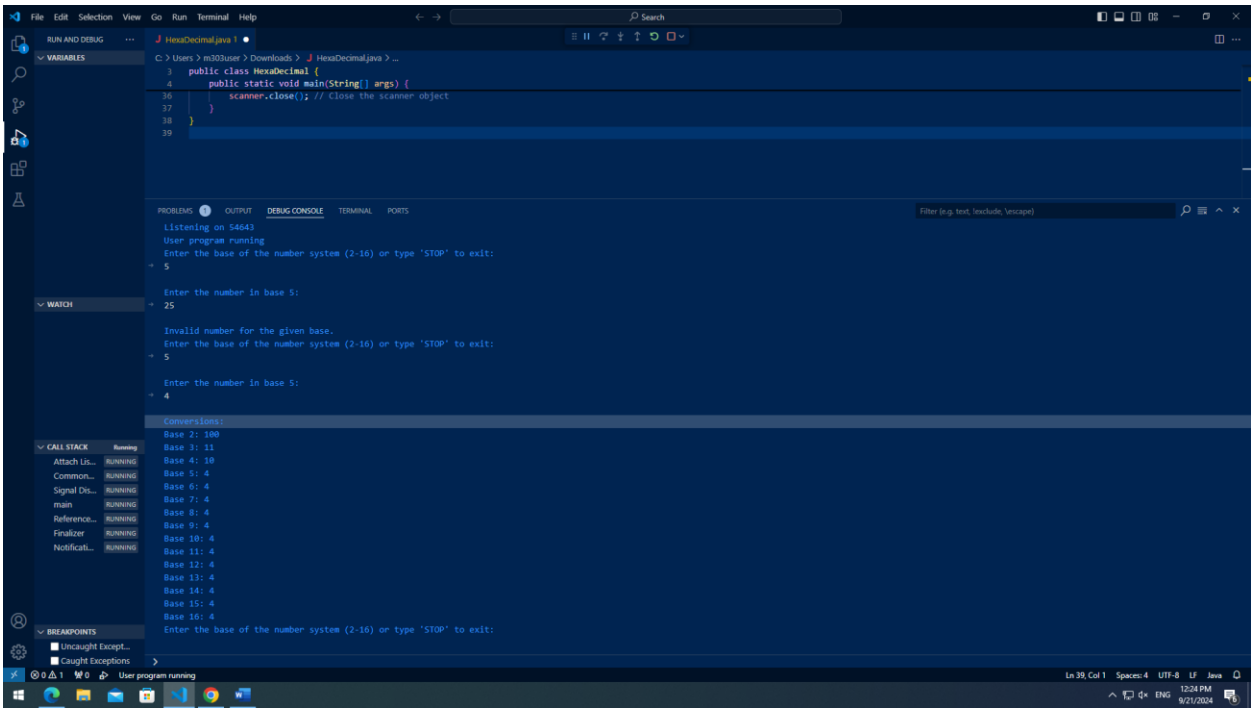
import java.util.Scanner;

public class HexaDecimal {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in); // Create a Scanner object for user input
        while (true) { // Infinite loop to keep the program running until the user decides to stop
            System.out.print("Enter the base of the number system (2-16) or type 'STOP' to exit: ");
            String input = scanner.nextLine().trim(); // Read user input and trim any extra spaces
            if (input.equalsIgnoreCase("STOP")) { // Check if the user wants to stop the program
                break; // Exit the loop if the user types "STOP"
            }
            int base;
            try {
                base = Integer.parseInt(input); // Convert the input to an integer
                if (base < 2 || base > 16) { // Validate if the base is between 2 and 16
                    System.out.println("Please enter a valid base between 2 and 16.");
                    continue; // Continue to the next iteration if the base is invalid
                }
            } catch (NumberFormatException e) {
                System.out.println("Invalid input. Please enter a number between 2 and 16.");
                continue; // Continue to the next iteration if the input is not a valid number
            }

            System.out.print("Enter the number in base " + base + ": ");
            String number = scanner.nextLine().trim(); // Read the number input and trim any extra spaces
            try {
                int decimalNumber = Integer.parseInt(number, base); // Convert the number to a decimal
(base 10)
                System.out.println("Conversions:");
                for (int i = 2; i <= 16; i++) { // Loop through bases 2 to 16
                    System.out.println("Base " + i + ": " + Integer.toString(decimalNumber,
i).toUpperCase()); // Convert and print the number in each base
                }
            } catch (NumberFormatException e) {
                System.out.println("Invalid number for the given base."); // Handle invalid number input
            }
        }
        scanner.close(); // Close the scanner object
    }
}
```


File Edit Selection View Go Run Terminal Help
Search
RUN AND DEBUG
VARIABLES
HexaDecimal.java 1
C: > Users > m303user > Downloads > HexaDecimal.java > ...
3 public class HexaDecimal {
4 public static void main(String[] args) {
36 scanner.close(); // Close the scanner object
37 }
38 }
39
PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS
Filter (e.g. text, !exclude, \escape)
Listening on 54643
User program running
Enter the base of the number system (2-16) or type 'STOP' to exit:
5
Enter the number in base 5:
25
Invalid number for the given base.
Enter the base of the number system (2-16) or type 'STOP' to exit:
5
Enter the number in base 5:
4
Conversions:
Base 2: 100
Base 3: 11
Base 4: 10
Base 5: 4
Base 6: 4
Base 7: 4
Base 8: 4
Base 9: 4
Base 10: 4
Base 11: 4
Base 12: 4
Base 13: 4
Base 14: 4
Base 15: 4
Base 16: 4
Enter the base of the number system (2-16) or type 'STOP' to exit:
WATCH
CALL STACK Running
Attach Lis... RUNNING
Common... RUNNING
Signal Dis... RUNNING
main RUNNING
Reference... RUNNING
Finalizer RUNNING
Notificati... RUNNING
BREAKPOINTS
Uncaught Except...
Caught Exceptions
User program running
Ln 39, Col 1 Spaces: 4 UTF-8 LF Java
ENG 12:24 PM 9/21/2024