

ASSIGNMENT -1 Consider you are asked to decode a secret message. The coded message is in numbers and each number stands for a specific letter. You discover enough of the secret code to decode the current message.

So far, you know: • 1 represents "D"

- 2 represents "W"
- 3 represents "E"
- 4 represents "L"
- 5 represents "H"
- 6 represents "O"
- 7 represents "R"

Write a program that prompts the user for 10 numbers, one at a time, and prints out the decoded message. If the user enters a number that is not one of those already deciphered, prompt him/her for a new number. Test your code with the following input: 5 3 4 4 6 2 6 7 4 1

CODE:

```
import java.util.Scanner;
public class SecretMessageDecoder {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        String secretCode = "DWELHOR";
        String decodedMessage = "";
        System.out.println("Enter 10 numbers to decode the secret message:");
        for (int i = 0; i < 10; i++) {
            int number = scanner.nextInt();
            char letter = decodeLetter(number);
            if (letter == '*') {
                System.out.println("Invalid number. Please enter a valid number.");
                i--;
            } else {
                decodedMessage += letter;
            }
        }
        System.out.println("Decoded Message: " + decodedMessage);
    }
    public static char decodeLetter(int number) {
        switch (number) {
            case 1:
                return 'D';
            case 2:
                return 'W';
            case 3:
                return 'E';
            case 4:
                return 'L';
            case 5:
                return 'H';
            case 6:
                return 'O';
            case 7:
                return 'R';
            default:
                return '*';
        }
    }
}
```

Output

STDIN

5 3 4 4 6 2 6 7 4 1

Output:

Enter 10 numbers to decode the secret message:

Decoded Message: HELLOWORLD