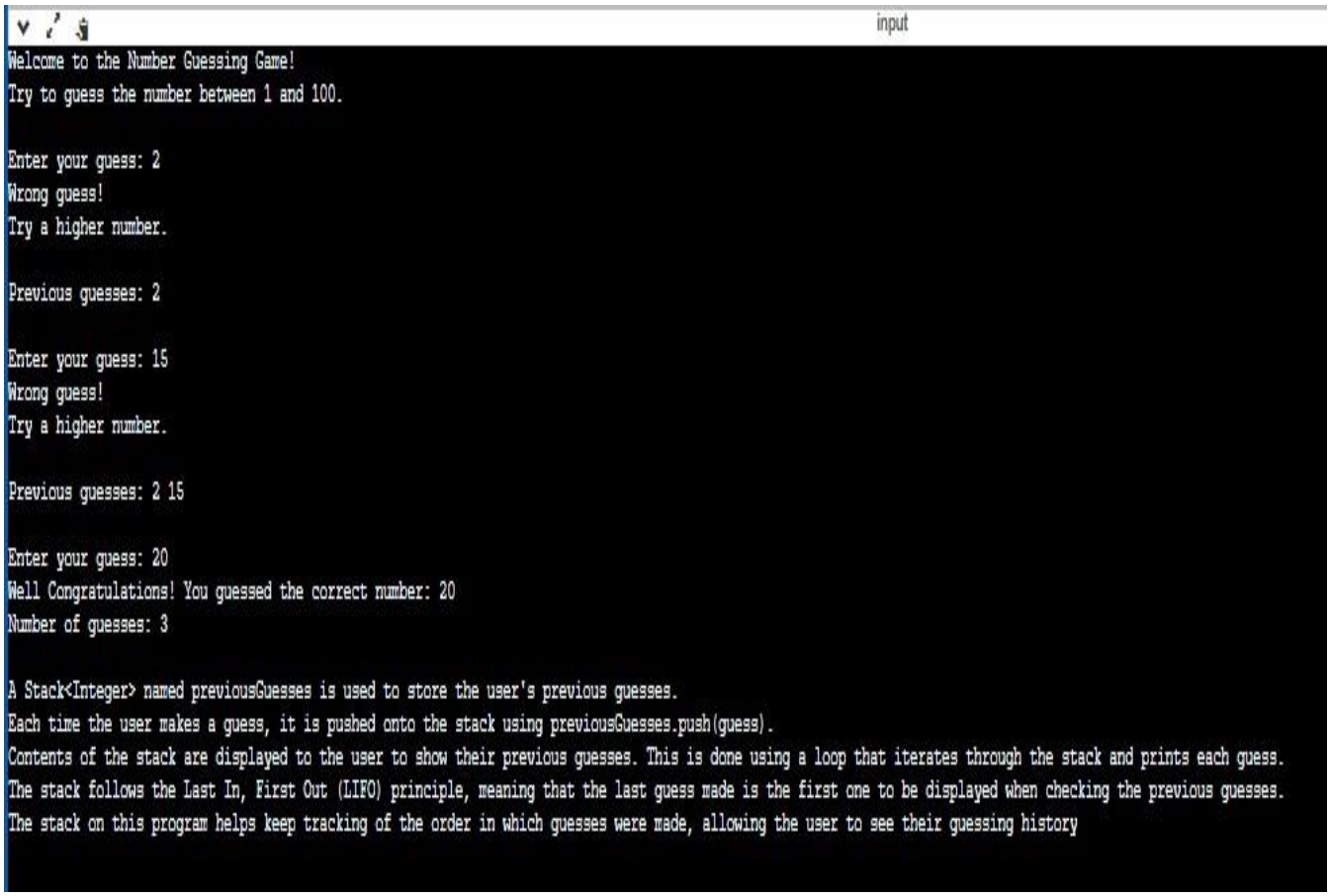
The **java program** is all about a guess game number in which the user needs to guess the right number if not the program will continue to ask again and give a hint like example try lower or higher number. But the correct number is 20 and 100 so if the user guesses one of these numbers the program will greet you with congratulations and then the program will terminate.

```
import java.util.Random;
import java.util.Scanner;
import java.util.Stack;
public class Guessgame {
public static void main(String[] args) {
playGuessGame();
}
public static void playGuessGame() {
Scanner scanner = new Scanner(System.in);
Random random = new Random();
int targetNum = random.nextInt(100) + 1;
Stack<Integer> previousGuesses = new Stack<>();
int numberOfGuesses = 0;
System.out.println("Welcome to the Number Guessing Game!");
System.out.println("Try to guess the number between 1 and 100.");
int guess;
do {
System.out.print("\nEnter your guess: ");
guess = scanner.nextInt();

if (guess < 1 || guess > 100) {
System.out.println("Invalid input! Please enter a number

between 1 and 100.");
continue;
}
numberOfGuesses++;

if (guess == 20 || guess == 100) {
System.out.println("Well Congratulations! You guessed the

correct number: " + guess);

System.out.println("Number of guesses: " +

numberOfGuesses);

System.out.println("\nA Stack<Integer> named
previousGuesses is used to store the user's previous guesses. ");
```

```
System.out.println("Each time the user makes a guess, it

is pushed onto the stack using previousGuesses.push(guess).");

System.out.println("Contents of the stack are displayed to
the user to show their previous guesses. This is done using a loop that
iterates through the stack and prints each guess.");

System.out.println("The stack follows the Last In, First
Out (LIFO) principle, meaning that the last guess made is the first one to
be displayed when checking the previous guesses.");

System.out.println("The stack on this program helps keep
tracking of the order in which guesses were made, allowing the user to see
their guessing history");
break;
} else {
System.out.println("Wrong guess!");

if (guess > targetNum) {
System.out.println("Try a lower number.");
} else {
System.out.println("Try a higher number.");
}

previousGuesses.push(guess);

System.out.print("\nPrevious guesses: ");
for (int prevGuess : previousGuesses) {
System.out.print(prevGuess + " ");
}
System.out.println();
}
} while (true);
scanner.close();
}

}
```

Output


input
Welcome to the Number Guessing Game!
Try to guess the number between 1 and 100.
Enter your guess: 2
Wrong guess!
Try a higher number.
Previous guesses: 2
Enter your guess: 15
Wrong guess!
Try a higher number.
Previous guesses: 2 15
Enter your guess: 20
Well Congratulations! You guessed the correct number: 20
Number of guesses: 3
A Stack<Integer> named previousGuesses is used to store the user's previous guesses.
Each time the user makes a guess, it is pushed onto the stack using previousGuesses.push(guess).
Contents of the stack are displayed to the user to show their previous guesses. This is done using a loop that iterates through the stack and prints each guess.
The stack follows the Last In, First Out (LIFO) principle, meaning that the last guess made is the first one to be displayed when checking the previous guesses.
The stack on this program helps keep tracking of the order in which guesses were made, allowing the user to see their guessing history