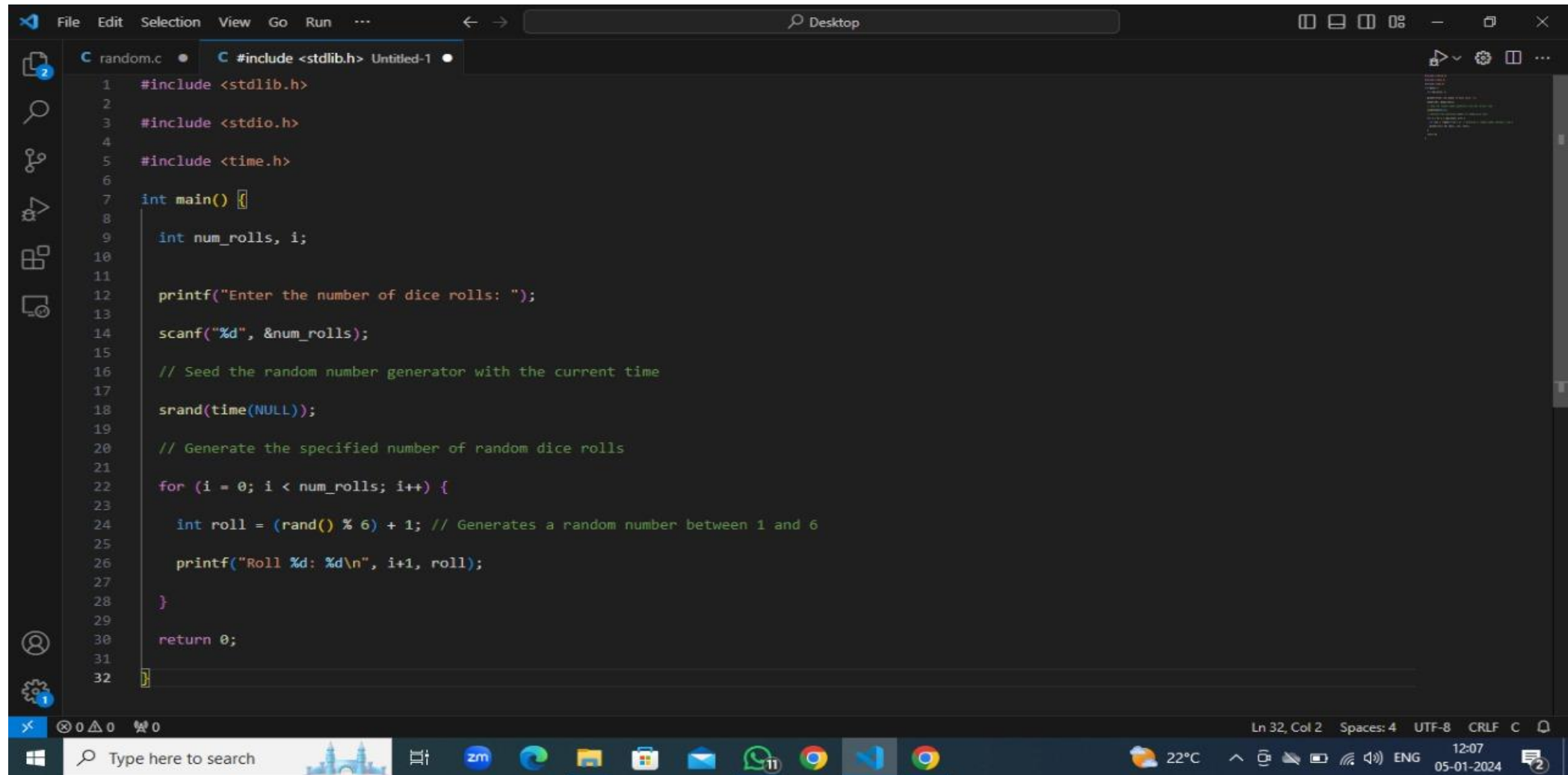


## 1. Question : Rolling Dice Generator

In this scenario, we are creating a simple rolling dice game where the user can input the number of dice rolls they want to make. We will use **srand()** to seed the random number generator with the current time, ensuring that each run of the program will generate a different sequence of random numbers.

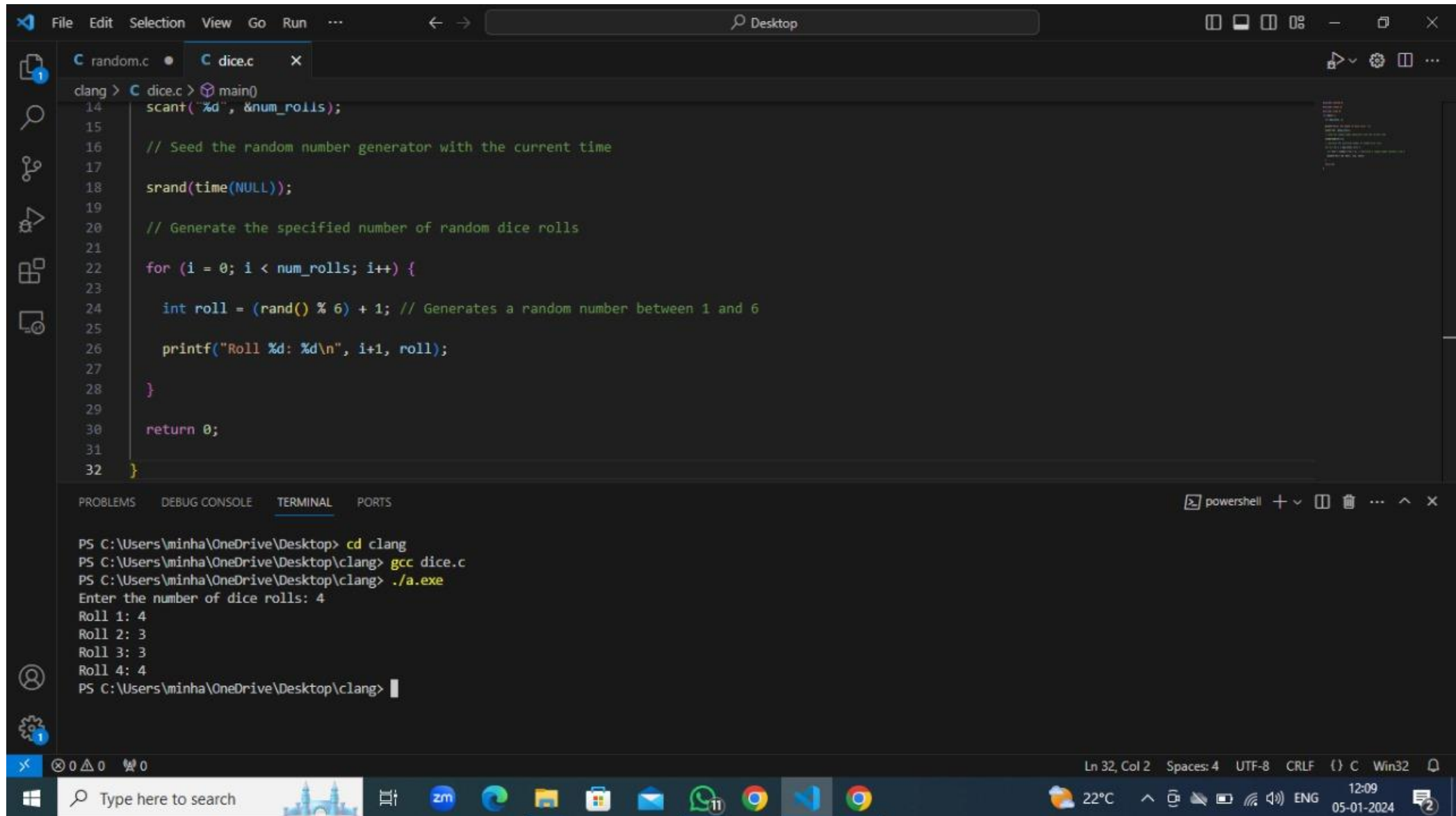
## Program:



```
1  #include <stdlib.h>
2
3  #include <stdio.h>
4
5  #include <time.h>
6
7  int main() {
8
9      int num_rolls, i;
10
11
12      printf("Enter the number of dice rolls: ");
13
14      scanf("%d", &num_rolls);
15
16      // Seed the random number generator with the current time
17
18      srand(time(NULL));
19
20      // Generate the specified number of random dice rolls
21
22      for (i = 0; i < num_rolls; i++) {
23
24          int roll = (rand() % 6) + 1; // Generates a random number between 1 and 6
25
26          printf("Roll %d: %d\n", i+1, roll);
27
28      }
29
30      return 0;
31
32 }
```

The screenshot shows a code editor with a dark theme. The file explorer on the left shows a file named 'random.c'. The code is a C program for a rolling dice generator. It includes headers for `stdlib.h`, `stdio.h`, and `time.h`. The `main` function prompts the user for the number of dice rolls, seeds the random number generator with the current time using `srand(time(NULL))`, and then uses a `for` loop to generate and print the specified number of random dice rolls. The status bar at the bottom indicates the current line and column (Ln 32, Col 2), the number of spaces (4), the encoding (UTF-8), the line ending (CRLF), and the language (C). The Windows taskbar at the bottom shows the search bar, task view, and several open applications including Zoom, Edge, File Explorer, Mail, WhatsApp, and Chrome. The system tray shows the temperature (22°C), the date and time (12:07, 05-01-2024), and the language (ENG).

# Output:



The image shows a Visual Studio Code editor window with a C program named 'dice.c' open. The program is designed to generate a specified number of random dice rolls. The code includes a main function that prompts the user for the number of rolls, seeds the random number generator with the current time, and then uses a loop to generate and print the rolls. The terminal output shows the program being compiled and executed, with the user entering '4' for the number of rolls, resulting in four random dice rolls: 4, 3, 3, and 4.

```
clang > C dice.c > main()
14  scanf("%d", &num_rolls);
15
16  // Seed the random number generator with the current time
17
18  srand(time(NULL));
19
20  // Generate the specified number of random dice rolls
21
22  for (i = 0; i < num_rolls; i++) {
23
24      int roll = (rand() % 6) + 1; // Generates a random number between 1 and 6
25
26      printf("Roll %d: %d\n", i+1, roll);
27
28  }
29
30  return 0;
31
32 }
```

PROBLEMS DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\minha\OneDrive\Desktop> cd clang
PS C:\Users\minha\OneDrive\Desktop\clang> gcc dice.c
PS C:\Users\minha\OneDrive\Desktop\clang> ./a.exe
Enter the number of dice rolls: 4
Roll 1: 4
Roll 2: 3
Roll 3: 3
Roll 4: 4
PS C:\Users\minha\OneDrive\Desktop\clang>
```

Ln 32, Col 2 Spaces: 4 UTF-8 CRLF {} C Win32

22°C 12:09 05-01-2024