

**Name: Badal Prabhakar Wanjari**

**Branch: Computer Technology**

**Section: B**

**Roll No. 140**

**Reg No. 20011045**

**Subject: Data Structures Lab**

## **Practical – 2**

**Aim:** Program to generate random natural numbers and print them in words.

**Program:**

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
    int n, x = 0, num, m;
    printf("Enter how many random number to generate in range of 1 to 100: ");
    scanf("%d", &n);
    while (n > 0)
    {
        num = rand() % 100;
        printf("%d : ", num);
        if (num == 0)
        {
            printf("zero\n");
            continue;
        }
        int revNum = 0;
        while (num > 0)
        {
            revNum = revNum * 10 + num % 10;
            num /= 10;
        }
        while (revNum > 0)
        {
            int x = revNum % 10;
            if (x == 1)
            {
                printf("One ");
            }
            else if (x == 2)
            {
                printf("Two ");
            }
            else if (x == 3)
            {
```

```
        printf("Three ");
    }
    else if (x == 4)
    {
        printf("Four ");
    }
    else if (x == 5)
    {
        printf("Five ");
    }
    else if (x == 6)
    {
        printf("Six ");
    }
    else if (x == 7)
    {
        printf("Seven ");
    }
    else if (x == 8)
    {
        printf("Eight ");
    }
    else if (x == 9)
    {
        printf("Nine ");
    }
    else
    {
        printf("Zero ");
    }
    revNum /= 10;
}
printf("\n");
n--;
}
return 0;
}
```

## Screenshot:

The screenshot displays the Visual Studio Code editor with a C program in `Practical_2.c` and its execution output in the terminal.

**Code in `Practical_2.c`:**

```
1 #include <stdio.h>
2 #include <stdlib.h>
3 int main()
4 {
5     int n, x = 0, num, m;
6     printf("Enter how many random number to generate in range of 1 to 100: ");
7     scanf("%d", &n);
8     while (n > 0)
9     {
10         num = rand() % 100;
11         printf("%d : ", num);
12         if (num == 0)
13         {
14             printf("zero\n");
15             continue;
16         }
17         int revNum = 0;
18         while (num > 0)
19         {
20             revNum = revNum * 10 + num % 10;
21             num /= 10;
22         }
23         while (revNum > 0)
24         {
25             int x = revNum % 10;
26             if (x == 1)
27             {
28                 printf("One ");
29             }
30             else if (x == 2)
```

**Terminal Output:**

```
Number of recursive calls: 4
PS C:\Users\Admin\Desktop\Notes\Data Structure Lab> cd "c:\Users\Admin\Desktop\Notes\Data Structure Lab" ; if ($?) { gcc Practical_2.c -o Practical_2 } ; if ($?) { .\Practical_2 }
Enter how many random number to generate in range of 1 to 100: 10
41 : Four One
67 : Six Seven
34 : Three Four
0 : zero
69 : Six Nine
24 : Two Four
78 : Seven Eight
58 : Five Eight
62 : Six Two
64 : Six Four
5 : Five
PS C:\Users\Admin\Desktop\Notes\Data Structure Lab>
```

**Conclusion:** I have successfully completed practical 2.