

## palindrome.c

```
1  /**
2   * C program to check if a number is a palindrome
3   * Palindrome: A number that remains the same when its digits are reversed
4   * e.g., 121, 1331
5   */
6  #include <stdio.h>
7
8  int main() {
9
10     int num, originalNum, reversedNum = 0, remainder;
11     printf("Enter an integer: ");
12     scanf("%d", &num);
13
14     originalNum = num;
15
16     // Reversing the number
17     while (num != 0) {
18         remainder = num % 10;
19         reversedNum = reversedNum * 10 + remainder;
20         num = num / 10;
21     }
22
23     if (originalNum == reversedNum) {
24         printf("%d is a palindrome.\n", originalNum);
25     } else {
26         printf("%d is not a palindrome.\n", originalNum);
27     }
28
29     return 0;
30 }
31
32 /**
33  * using functions
34  #include <stdio.h>
35  int isPalindrome(int num) {
36      int originalNum = num;
37      int reversedNum = 0, remainder;
38
39      while (num != 0) {
40          remainder = num % 10;
41          reversedNum = reversedNum * 10 + remainder;
42          num = num / 10;
43      }
44
45      return originalNum == reversedNum;
46  }
47
48  int main() {
49      int num;
50      printf("Enter an integer: ");
51      scanf("%d", &num);
```

```
52 |
53 |     if (isPalindrome(num)) {
54 |         printf("%d is a palindrome.\n", num);
55 |     } else {
56 |         printf("%d is not a palindrome.\n", num);
57 |     }
58 |
59 |     return 0;
60 | }
61 |
62 | */
```