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C Program to Reverse a Number

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C Program to Reverse a Number

In this tutorial, we will write a program to reverse a number in C language. An example program is shown below

```c
#include<stdio.h>

int reverse(int num){
    int rev = 0, rem;
    while (num!=0)
    {
        rem = num%10; // last digit of num
        rev = rev*10+rem; // Generate a number from rev with rem as last digit
        num = num/10;
    }
    return rev;
}

int main(){
```

```c
    int num = 2534;
    int rev= reverse(num);
    printf("The reversed number is %d", rev);

    return 0;
}
```

Code Snippet 1: C Program to Reverse a Number

As shown in a code snippet 1,

1. We created a function "reverse" which take 1 parameter "num";
2. In function body an integer variable "rev" is initialized which has value "0"; the variable "rev" will be used to store the reverse number. Another integer variable "rem" is declared which will store the remainder.
3. To get the remainder of the number we will take its modulus such as "num%10" and store it in "rem"
4. To generate a number form reverse number with the remainder as the last digit we will use the formula "rev*10+rem"
5. In every iteration, we will divide the number by 10 to get the number for the next iterations. For example, if the number in the first iteration is "87922" by dividing it by "10" we will get "8792" for next iteration and the loop will keep running till the number gets 0.
6. At the end of the function, we will return the reverse number to the main program
7. In the main program we have initialized an integer variable "num" which has value "2534"; this program will reverse this number.
8. We have declared an integer variable "rev" which will store the reverse number; and called a reverse function and the variable "num" is passed to it
9. The "printf" function is used to print "The reversed number is %d"; the "%d" will be replaced by a reverse number.
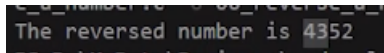
The output of the following program is shown below

Figure 1: Program Output

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