**Program 2**

**AIM: Write a program to check validity of an IP address**

**SOURCE CODE:**

*// Program to check validity of a given IPV4 address*

*#include<iostream>*

*#include<string.h>*

*#include<sstream>*

*using namespace std;*

*#define DOT "."*

*bool validpartcheck(char\* s)*

*{*

*int n = strlen(s);*

*//Checking length of string*

*if (n > 3)*

*return false;*

*//checing that string contains numbers*

*for (int i = 0; i < n; i++)*

*if ((s[i] >= '0' && s[i] <= '9') == false)*

*return false;*

*string str(s);*

*//checing numbers do not initialize with 0*

*if (str.find('0') == 0 && n > 1)*

*return false;*

*stringstream ss(str);*

*int x;*

*ss>>x;*

*// the string is valid if the number*

*// generated is between 0 to 255*

*return (x >= 0 && x <= 255);*

*}*

*/\* return 1 if IP string is*

*valid, else return 0 \*/*

*int validipcheck(char\* ip)*

*{*

*if (ip == NULL)*

*return 0;*

*int i, num, dots = 0;*

*int len = strlen(ip);*

*int count = 0;*

*// the number dots in the original*

*// string should be 3*

*// for it to be valid*

*for (int i = 0; i < len; i++)*

*if (ip[i] == '.')*

*count++;*

*if (count != 3)*

*return false;*

*// See following link for strtok()*

*char \*ptr = strtok(ip, ".");*

*if (ptr == NULL)*

*return 0;*

*while (ptr) {*

*/\* after parsing string, it must be valid \*/*

*if (validpartcheck(ptr))*

*{*

*/\* parse remaining string \*/*

*ptr = strtok(NULL, ".");*

*if (ptr != NULL)*

*++dots;*

*}*

*else*

*return 0;*

*}*

*if (dots != 3)*

*return 0;*

*return 1;*

*}*

*int main()*

*{*

*char ip1[] = "113.0.0.1";*

*char ip2[] = "15.530.100.1";*

*validipcheck(ip1) ? cout<<"Given IP Address is Valid\n" : cout<<"Given IP Address is In-valid\n";*

*validipcheck(ip2) ? cout<<"Given IP Address is Valid\n" : cout<<"Given IP Address is In-valid\n";*

*return 0;*

*}*

**INPUT:**

*"113.0.0.1";*

*"15.530.100.1";*

**OUTPUT:**

