ASSIGNMENT-3

AIM:-Write a program to Check given IP address is valid IPV6 or not.

```cpp
#include<iostream>
#include<bits/stdc++.h>
using namespace std;
int main(){
        int count=0,i,flag=0;
        char str[40];
        int j=0;
        cout<<"Enter the IP address=";
        cin>>str;
        for(i=0;i<strlen(str);i++){
                if(str[i]==':'){
                        flag=0;
                        count++;
                        if(count>7)
                        {
                                j=0;
                                cout<<"No. of Colons in the given IP address are more";
                                break;
                        }
                }
                else if((0>str[i]>9)||('a'>str[i]>'f')||('A'>str[i]>'F'))
                {
                        j=0;
                        break;
                }
                else
                {
                        j=1;
                        flag++;
                        if(flag>4)
                        {
                                j=0;
                                break;
                        }
                }
        }
        if(count==7 && j==1){
                cout<<"This is a valid IPV6 address";
        }
        else
        {
                cout<<"This is an invalid IPV6 address"<<endl;
```

```
        }
return 0;
}
```

OUTPUT-

```
Enter the IP address=2001:3456:abcd:aaaa:ffff:adfe:5555:eded
This is a valid IPV6 address
--------------------------------
Process exited after 33.45 seconds with return value 0
Press any key to continue . . .
```