**SOURCE CODE:**

**#include <bits/stdc++.h>**

**using namespace std;**

**string get\_string(char c)**

**{**

**string g(1,c);**

**return g;**

**}**

**void generateCode(int n)**

**{**

**if(n<=0)**

**{**

**cout<<"invalid input\n";**

**return;**

**}**

**vector<string> b,temp;**

**b.push\_back("0");**

**b.push\_back("1");**

**for(int i=0;i<n-1;i++)**

**{**

**for(int j=0;j<b.size();j++)**

**{**

**temp.push\_back(get\_string('0')+b[j]);**

**}**

**for(int j=b.size()-1;j>=0;j--)**

**{**

**temp.push\_back(get\_string('1')+b[j]);**

**}**

**b=temp;**

**temp.clear();**

**}**

**for(int i=0;i<b.size();i++)**

**cout<<b[i]<<"\n";**

**}**

**int main()**

**{**

**int n;**

**cout<<"Enter the i/p n:\n";**

**cin>>n;**

**cout<<"Printing gray codes for the given i/p "<<n<<" bit\n";**

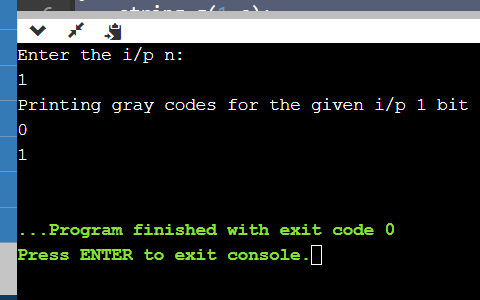
**generateCode(n);**

**return 0;**

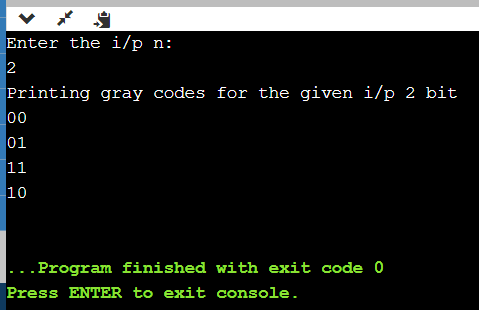
**}**

**Output:**

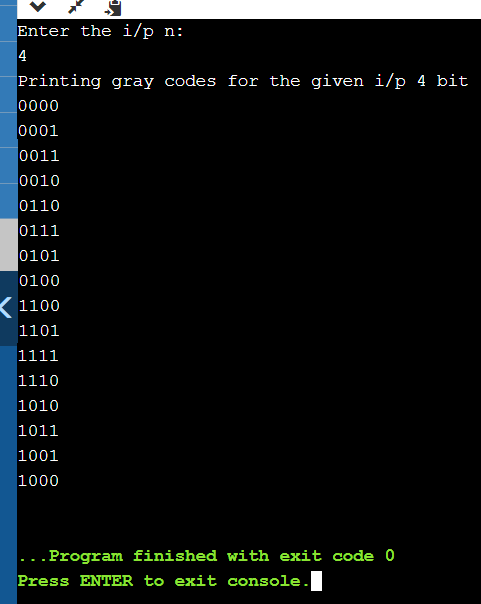
**For N=1**

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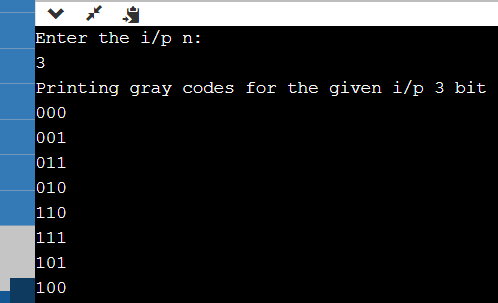
**For N=2**

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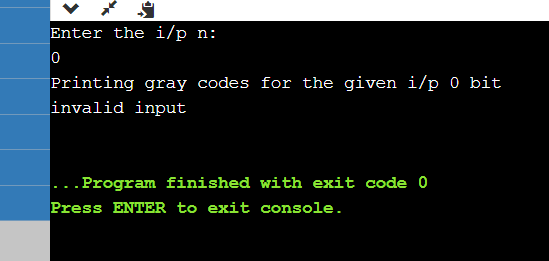
**For N=4**

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**For N=3**

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**For N=0**

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