**Practical – 4**

**Practical Statement** : Generate the Golomb Codes for input parameter m=5 and for the set of integers n={0,1,2,…,15}.

**Code :**

#include <bits/stdc++.h>

using namespace std;

void findGolomb(int n,int m);

int main()

{

int m;

cout<<"190420116071 : Meet Vaghasiya"<<endl;

cout<<"Practical 4 : Generate the Golomb Codes for input parameter m=5 and for the set of integers "

"n={0,1,2,…,15}."<<endl;

cout<<"Enter m : ";

cin>>m;

cout<<"n\tq\tr\tcodeword"<<endl;

for(int i=0;i<=15;i++)

findGolomb(i,m);

return 0;

}

void findGolomb(int n,int m){

int c,k,q,r;

string x="";

string y = "";

q = n/m;

for(int i=1;i<=q;i++)

x=x+"1";

x = x+"0";

k = ceil(log2(m));

c = pow(2,k)-m;

r = n%m;

int r1=r;

if(r>=0 && r<c){

k = k-1;

}

else{

r1=r1+c;

}

while(r1>0){

y.push\_back((char)((char)((int)('0')+(r1%2))));

r1=r1/2;

}

string y1 ="";

for(int i=y.length()-1;i>=0;i--)

y1=y1+y.at(i);

int len = k-y.length();

string temp = "";

while(len > 0){

temp+="0";

len--;

}

x=x+temp;

x = x+y1;

cout<<n<<"\t"<<q<<"\t"<<r<<"\t"<<x<<endl;

}

Output :



