EXPERIMENT NO 1

```
#include<stdio.h>
#include<ctype.h>
#include<string.h>
int main()
{
      int pts=100, k1, k2;
      char pt[pts], ct[100];
      char t[strlen(pt)], c[strlen(pt)];
      printf("Enter the Plain text:- ");
      scanf("%s",pt);
      printf("Enter the key1 and key2:-");
      scanf("%d%d",&k1,&k2);

      printf("Your ciper text is:- ");
      for(int i=0;i<strlen(pt);i++)
      {
            if(pt[i]>=97)
            {
                  t[i]=(((pt[i]-97)*k1)%26)+97;
                  c[i]=(((t[i]-97)+k2)%26)+97;
            }
            else
            {
                  t[i]=(((pt[i]-65)*k1)%26)+65;
                  c[i]=(((t[i]-65)+k2)%26)+65;
            }
            printf("%c",c[i]);
      }
      printf("\n");

      int k1_inv = 0;
    int flag = 0;
      for (int i = 0; i < 26; i++)
    {
            flag = (k1 * i) % 26;
      if (flag == 1)
        {
            k1_inv = i;
        }
    }
    printf("\n");

    char t1[strlen(c)], p[strlen(c)];
    printf("Your decrypted text is:- ");
    for(int i=0;i<strlen(c);i++)
    {
      if(c[i]>=97)
            {
                  t1[i]=(((c[i]-97)-k2)%26)+97;
                  p[i]=(((t1[i]-97)*k1_inv)%26)+97;
            }
            else
            {
```

```
                t1[i]=(((c[i]-65)-k2)%26)+65;
                p[i]=(((t1[i]-65)*k1_inv)%26)+65;
            }
            printf("%c",p[i]);
    }
    printf("\n");

      return 0;
}
```

```
divyang@Divyang:~/CSS$ ./a.out
Enter the Plain text:- jay
Enter the key1 and key2:-3
5
Your ciper text is:- gfz
Your decrypted text is:- jay
```

EXPERIMENT NO 2

SBOX

```
#include<stdio.h>
#include<math.h>
void main()
{
	int S1[4][16] =
		{
		14,  4, 13,  1,  2, 15, 11,  8,  3, 10,  6, 12,  5,  9,  0,  7,
		0, 15,  7,  4, 14,  2, 13,  1, 10,  6, 12, 11,  9,  5,  3,  8,
		4,  1, 14,  8, 13,  6,  2, 11, 15, 12,  9,  7,  3, 10,  5,  0,
		15, 12,  8,  2,  4,  9,  1,  7,  5, 11,  3, 14, 10,  0,  6, 13
		};
	//given
	int input[6]={1,1,0,0,1,1};	 // convert six bits to 4 bits = sbox
	int c=0,r=0;
	for(int i=0;i<6;i++)
	{				//to get row and column values in binary
		r=10*r+input[i];
		i=i+4;
	}
	printf("Binary row is %d\n",r);
	for (int i=1;i<5;i++)
		c=10*c+input[i];
	printf("Binary column is %d\n",c);

	int x=0,y=0,a=0;                                                    //to convert
the above binary to decimal
	for (int i=0;r!=0;++i)
	{
		a=r%10;
		x=(a)*(pow(2,i))+x;
		r=r/10;
	}
	printf("Row is %d\n",x);
	for (int i=0;c!=0;i++)
	{
		a=c%10;
		y=a*pow(2,i)+y;
		c=c/10;
	}
	printf("Column is %d\n",y);
	int n=S1[x][y];
	int bin[4]={};
	//getting the value from S1
	printf("n=%d\n",n);

	printf("binary of sbox is ");
	if(n==0)
	//Converting the Decimal to binary
		printf("0000\n");
```

```
	else
	{
		for(int i=0;n!=1;i++)
		{
			int b=n%2;
			bin[i]=b;
			n=n/2;
		}
		for	(int i=0;i<4;i++)
			printf("%d",bin[i]);
	}

}
```

```
divyang@Divyang:~/CSS$ gcc SBOX.c -lm
divyang@Divyang:~/CSS$ ./a.out
Binary row is 11
Binary column is 1001
Row is 3
Column is 9
n=11
binary of sbox is 1100
```

EXPERIMENT NO 3

RSA

```
#include<stdio.h>
#include<math.h>                              //source GFG
int gcd(int a,int b){                         //calculate gcd
      int temp;
      while(1){
            temp=a%b;
            if(temp==0)
                  return b;
            a=b;
            b=temp;
      }
}
void main()
{
      int p=5,q=7;                            //Select 2 prime numbers
      int n=p*q;                                    //n calculation
      float phi=(p-1)*(q-1);                        //phi calculation
      int e=2;                                      //assume
      while(e<phi){
            if(gcd(e,phi)==1)                 //gcd==1 stop else continue to find value of e
                  break;
            else
                  e++;
      }
      printf("The Value of E is %d\n",e);//e=encrypt
      int d=round(phi/e);                           //d=decrypt  (my method similar)(actual
method d=e^(-1) mod phi)
      d=fmod(d,phi);
      printf("The Value of D is %d\n",d);

      int input=10;
      printf("The Input Text is %d\n",input);

      int c=pow(input,e);                           //c=m^e mod n
      c=fmod(c,n);
      printf("ENcrypted text is %d\n",c);

      int plain=pow(c,d);                           //m=c^d mod n
      plain=fmod(plain,n);
      printf("Decryption is %d\n",plain);
}
```

```
divyang@Divyang:~/CSS$ sudo gcc RSA.c -lm
divyang@Divyang:~/CSS$ ./a.out
The Value of E is 5
The Value of D is 5
The Input Text is 10
ENcrypted text is 5
Decryption is 10
```

EXPERIMENT NO 4

DIFFIE HELLMAN

```
#include<stdio.h>
#include<string.h>
#include<math.h>
int main()
{
	int p,g,pk1,pk2,a,b;
	float k1,k2;

	printf("Enter any prime number\n");
	scanf("%d",&p);

	printf("Enter the primitive root\n");
	scanf("%d",&g);

	printf("Enter the private key viraj\n");
	scanf("%d",&pk1);

	a=(((long long int)pow(g,pk1))%p);

	printf("Enter the private key arjun\n");
	scanf("%d",&pk2);

	b=(((long long int)pow(g,pk2))%p);

	k1=(((long long int)pow(b,pk1))%p);
	k2=(((long long int)pow(a,pk2))%p);

	printf("viraj computes %f\n",k1);
	printf("arjun computes %f\n",k2);

	if(k1==k2)
		printf("%f is a shared key\n",k1);
	else
		printf("It is not a shared key");
	return 0;
}
```

```
divyang@Divyang:~/CSS$ ./a.out
Enter any prime number
7
Enter the primitive root
3
Enter the private key viraj
2
Enter the private key arjun
2
viraj computes 4.000000
arjun computes 4.000000
4.000000 is a shared key
```

EXPERIMENT NO 5

MD5

```
#include<stdio.h>
int main()
{
	int n,c,k,cha;
	int buff[448],buff2[64],buff3[512],buff1[64];
	printf("Enter the Character\n");
	scanf("%c",&cha);
	n=cha;

	for(c=7;c>=0;c--)
	{
		k=n >> c;
		if(k & 1)
		{
			printf("1");
			buff[c]=0;
		}
		else
		{
			printf("0");
			buff[c]=1;
		}
	}
	printf("\nSeparate\n");
	for(int i=0;i<8;i++)
	{
		printf("%d",buff[i]);
	}
	printf("\n");
	printf("The Length of the Array is 8");
	printf("\nThe message will be padded to make it 448 mod 512 bits long");
	printf("\nSince the message is 8 bit long. We will add 440 to make it 448 mod
512=448.\nAnd then add 1 and 439 zeros.\n");
	buff[8]=1;
	for(int i=9;i<448;i++)
		buff[i]=0;
	for(int i=0;i<448;i++)
		printf("%d",buff[i]);
	printf("\n");
	printf("\n Now padding rest 64 bits\n");
	k=0;
	n=8;
	for(int i=63;i>=0;i--)
	{
		k=n >> i;
		if(k & 1)
		{
			printf("1");
			buff2[i]=1;
```

```
            }
            else
            {
                  printf("0");
                  buff2[i]=0;
            }
      }
            for(int i=63;i>=0;i--)
            {
                  buff1[63-i]=buff2[i];
                  printf("%d",buff2[i]);
            }
            printf("\n");
      printf("\nThe Final Padded Output\n");
            for(int i=0; i<448;i++)
                  buff3[i]=buff[i];
            for(int i=0; i<64;i++)
                  buff3[448+i]=buff1[i];
            for(int i=0; i<512;i++)
                  printf("%d",buff3[i]);
            printf("\n");
            return 0;
}

divyang@Divyang:~/CSS$ ./a.out
Enter the Character
d
01100100
Separate
11011001
The Length of the Array is 8
The message will be padded to make it 448 mod 512 bits long
Since the message is 8 bit long. We will add 440 to make it 448 mod 512=448.
And then add 1 and 439 zeros.
1101100110000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
Now padding rest 64 bits
0000000000000000000000000001000000000000000000000000000001000000000000000000000000000000010000000000000000000000000000000000000001
0000000000000000000000000000001000
The Final Padded Output
1101100110000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000010000000000000000000000000000001000
```

EXPERIMENT NO 6

N/W Reconnaissance Tools

```
divyang@Divyang:~/CSS$ nslookup google.com
Server:         192.168.0.1
Address:        192.168.0.1#53
Non-authoritative answer:
Name:   google.com
Address: 172.217.27.206
Name:   google.com
Address: 2404:6800:4009:800::200e


divyang@Divyang:~/CSS$ whois google.com
Domain Name: GOOGLE.COM
Registry Domain ID: 2138514_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.markmonitor.com
Registrar URL: http://www.markmonitor.com
Updated Date: 2018-02-21T18:36:40Z
Creation Date: 1997-09-15T04:00:00Z
Registry Expiry Date: 2020-09-14T04:00:00Z
Registrar: MarkMonitor Inc.
Registrar IANA ID: 292
Registrar Abuse Contact Email: abusecomplaints@markmonitor.com
Registrar Abuse Contact Phone: +1.2083895740
Domain Status: clientDeleteProhibited https://icann.org/epp#clientDeleteProhibited
Domain Status: clientTransferProhibited https://icann.org/epp#clientTransferProhibited
Domain Status: clientUpdateProhibited https://icann.org/epp#clientUpdateProhibited
Domain Status: serverDeleteProhibited https://icann.org/epp#serverDeleteProhibited
Domain Status: serverTransferProhibited https://icann.org/epp#serverTransferProhibited
Domain Status: serverUpdateProhibited https://icann.org/epp#serverUpdateProhibited
Name Server: NS1.GOOGLE.COM
Name Server: NS2.GOOGLE.COM
Name Server: NS3.GOOGLE.COM
Name Server: NS4.GOOGLE.COM
DNSSEC: unsigned

divyang@Divyang:~/CSS$ dig google.com
; <<>> DiG 9.11.3-1ubuntu1.5-Ubuntu <<>> google.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 1773
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 4, ADDITIONAL: 9
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;google.com.                    IN      A
;; ANSWER SECTION:
google.com.             134     IN      A       172.217.27.206
;; AUTHORITY SECTION:
google.com.             111988  IN      NS      ns3.google.com.
google.com.             111988  IN      NS      ns1.google.com.
google.com.             111988  IN      NS      ns4.google.com.
```

```
google.com.             111988  IN      NS      ns2.google.com.
;; ADDITIONAL SECTION:
ns4.google.com.         101808  IN      A       216.239.38.10
ns4.google.com.         61230   IN      AAAA    2001:4860:4802:38::a
ns1.google.com.         153647  IN      A       216.239.32.10
ns1.google.com.         131684  IN      AAAA    2001:4860:4802:32::a
ns3.google.com.         61230   IN      A       216.239.36.10
ns3.google.com.         131684  IN      AAAA    2001:4860:4802:36::a
ns2.google.com.         131684  IN      A       216.239.34.10
ns2.google.com.         131684  IN      AAAA    2001:4860:4802:34::a
;; Query time: 41 msec
;; SERVER: 192.168.0.1#53(192.168.0.1)
;; WHEN: Tue Apr 23 19:21:14 DST 2019
;; MSG SIZE  rcvd: 303
```

EXPERIMENT NO 7

DOS ATTACK

```
root@Divyang:/home/divyang# hping3 -c 1000000 -d 120 -S -w 64 -p 8090 --flood --rand-source
192.168.0.100

divyang@Divyang:~$ sudo hping3 192.168.5.177 -d 80
```

EXPERIMENT NO 8

FIREWALL using IPTABLES

```
c502@22D50211:~$ sudo iptables -L -v
Chain INPUT (policy ACCEPT 0 packets, 0 bytes)
pkts bytes target prot opt in out source destination

Chain FORWARD (policy ACCEPT 0 packets, 0 bytes)
pkts bytes target prot opt in out source destination

Chain OUTPUT (policy ACCEPT 0 packets, 0 bytes)
pkts bytes target prot opt in out source destination


c502@22D50211:~$ sudo iptables -L | grep policy
Chain INPUT (policy ACCEPT)
Chain FORWARD (policy ACCEPT)
Chain OUTPUT (policy ACCEPT)


c502@22D50211:~$ ping 192.168.5.38
PING 192.168.5.38 (192.168.5.38) 56(84) bytes of data.
64 bytes from 192.168.5.38: icmp_seq=1 ttl=64 time=0.545 ms
64 bytes from 192.168.5.38: icmp_seq=2 ttl=64 time=0.280 ms
64 bytes from 192.168.5.38: icmp_seq=3 ttl=64 time=0.318 ms
64 bytes from 192.168.5.38: icmp_seq=4 ttl=64 time=0.308 ms
64 bytes from 192.168.5.38: icmp_seq=5 ttl=64 time=0.306 ms
64 bytes from 192.168.5.38: icmp_seq=6 ttl=64 time=0.286 ms
64 bytes from 192.168.5.38: icmp_seq=7 ttl=64 time=0.317 ms
64 bytes from 192.168.5.38: icmp_seq=8 ttl=64 time=0.304 ms
64 bytes from 192.168.5.38: icmp_seq=9 ttl=64 time=0.304 ms
64 bytes from 192.168.5.38: icmp_seq=10 ttl=64 time=0.313 ms
64 bytes from 192.168.5.38: icmp_seq=11 ttl=64 time=0.288 ms
^C
--- 192.168.5.38 ping statistics ---
11 packets transmitted, 11 received, 0% packet loss, time 9996ms
rtt min/avg/max/mdev = 0.280/0.324/0.545/0.072 ms


c502@22D50211:~$ ping 192.168.5.38
PING 192.168.5.38 (192.168.5.38) 56(84) bytes of data.
^C
--- 192.168.5.38 ping statistics ---
59 packets transmitted, 0 received, 100% packet loss, time 58454ms


c502@22D50211:~$ sudo iptables -A INPUT -s 192.168.5.38 -j DROP


c502@22D50211:~$ ping 192.168.5.38
PING 192.168.5.38 (192.168.5.38) 56(84) bytes of data.
^C
--- 192.168.5.38 ping statistics ---
7 packets transmitted, 0 received, 100% packet loss, time 6046ms
```

```
c502@22D50211:~$ sudo iptables -L
Chain INPUT (policy ACCEPT)
target prot opt source destination
DROP all -- 192.168.5.38 anywhere

Chain FORWARD (policy ACCEPT)
target prot opt source destination

Chain OUTPUT (policy ACCEPT)
target prot opt source destination


c502@22D50211:~$ sudo iptables -F


c502@22D50211:~$ ping 192.168.5.38
PING 192.168.5.38 (192.168.5.38) 56(84) bytes of data.
64 bytes from 192.168.5.38: icmp_seq=1 ttl=64 time=0.302 ms
64 bytes from 192.168.5.38: icmp_seq=2 ttl=64 time=0.286 ms
64 bytes from 192.168.5.38: icmp_seq=3 ttl=64 time=0.286 ms
64 bytes from 192.168.5.38: icmp_seq=4 ttl=64 time=0.277 ms
^C
--- 192.168.5.38 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 2999ms
rtt min/avg/max/mdev = 0.277/0.287/0.302/0.022 ms



c502@22D50211:~$ sudo /sbin/iptables-save
# Generated by iptables-save v1.6.0 on Tue Mar 26 12:07:01 2019
*filter
:INPUT ACCEPT [694:105236]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [488:81302]
COMMIT
# Completed on Tue Mar 26 12:07:01 2019


c502@22D50211:~$ sudo iptables -A INPUT -p tcp --dport ssh -j DROP

c502@22D50211:~$ sudo /sbin/iptables-save
# Generated by iptables-save v1.6.0 on Tue Mar 26 12:15:35 2019
*filter
:INPUT ACCEPT [581:128785]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [426:73769]
-A INPUT -p tcp -m tcp --dport 22 -j DROP
COMMIT
# Completed on Tue Mar 26 12:15:35 2019

c502@22D50211:~$ sudo iptables -L
Chain INPUT (policy ACCEPT)
```

```
target prot opt source destination
DROP tcp -- anywhere anywhere tcp dpt:ssh

Chain FORWARD (policy ACCEPT)
target prot opt source destination

Chain OUTPUT (policy ACCEPT)
target prot opt source destination
```

c502@22D50211:~$ sudo iptables -F

EXPERIMENT NO 9

NMAP

comp@comp:~$ nmap -sP google.com facebook.com yahoo.com

```
Starting Nmap 7.01 ( https://nmap.org ) at 2019-04-05 11:54 IST
Nmap scan report for google.com (172.217.166.78)
Host is up (0.00037s latency).
Other addresses for google.com (not scanned): 2404:6800:4009:80d::200e
rDNS record for 172.217.166.78: bom05s15-in-f14.1e100.net
Nmap scan report for facebook.com (157.240.24.35)
Host is up (0.00044s latency).
Other addresses for facebook.com (not scanned): 2a03:2880:f12f:83:face:b00c:0:25de
rDNS record for 157.240.24.35: edge-star-mini-shv-01-sin2.facebook.com
Nmap scan report for yahoo.com (98.138.219.231)
Host is up (0.00039s latency).
Other addresses for yahoo.com (not scanned): 98.137.246.8 98.138.219.232 72.30.35.10
98.137.246.7 72.30.35.9 2001:4998:c:1023::5 2001:4998:44:41d::3 2001:4998:44:41d::4
2001:4998:58:1836::11 2001:4998:58:1836::10 2001:4998:c:1023::4
rDNS record for 98.138.219.231: media-router-fp1.prod1.media.vip.ne1.yahoo.com
Nmap done: 3 IP addresses (3 hosts up) scanned in 1.99 seconds
```

comp@comp:~$ sudo nmap -v -O google.com

```
Starting Nmap 7.01 ( https://nmap.org ) at 2019-04-05 11:54 IST
Initiating Ping Scan at 11:54
Scanning google.com (172.217.166.78) [4 ports]
Completed Ping Scan at 11:54, 0.23s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 11:54
Completed Parallel DNS resolution of 1 host. at 11:54, 0.00s elapsed
Initiating SYN Stealth Scan at 11:54
Scanning google.com (172.217.166.78) [1000 ports]
Discovered open port 443/tcp on 172.217.166.78
Discovered open port 80/tcp on 172.217.166.78
Completed SYN Stealth Scan at 11:54, 8.57s elapsed (1000 total ports)
Initiating OS detection (try #1) against google.com (172.217.166.78)
Nmap scan report for google.com (172.217.166.78)
Host is up (0.00037s latency).
Other addresses for google.com (not scanned): 2404:6800:4009:80d::200e
rDNS record for 172.217.166.78: bom05s15-in-f14.1e100.net
Not shown: 998 filtered ports
PORT   STATE SERVICE
80/tcp  open  http
443/tcp open  https
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1
closed port
Device type: general purpose
Running: Linux 2.6.X
OS CPE: cpe:/o:linux:linux_kernel:2.6
OS details: Linux 2.6.18 - 2.6.22
TCP Sequence Prediction: Difficulty=256 (Good luck!)
IP ID Sequence Generation: All zeros

Read data files from: /usr/bin/../share/nmap
OS detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 10.97 seconds
             Raw packets sent: 2053 (92.900KB) | Rcvd: 18 (1.024KB)
```

comp@comp:~$ nmap -sT google.com facebook.com yahoo.com

```
Starting Nmap 7.01 ( https://nmap.org ) at 2019-04-05 11:54 IST
Nmap scan report for google.com (172.217.166.78)
Host is up (0.00043s latency).
Other addresses for google.com (not scanned): 2404:6800:4009:80d::200e
rDNS record for 172.217.166.78: bom05s15-in-f14.1e100.net
Not shown: 998 filtered ports
PORT   STATE SERVICE
80/tcp  open  http
443/tcp open  https

Nmap scan report for facebook.com (157.240.24.35)
Host is up (0.0045s latency).
Other addresses for facebook.com (not scanned): 2a03:2880:f12f:83:face:b00c:0:25de
rDNS record for 157.240.24.35: edge-star-mini-shv-01-sin2.facebook.com
Not shown: 997 filtered ports
PORT   STATE  SERVICE
80/tcp   open   http
443/tcp  open   https
5222/tcp closed xmpp-client

Nmap scan report for yahoo.com (98.138.219.231)
Host is up (0.00037s latency).
Other addresses for yahoo.com (not scanned): 98.137.246.8 98.138.219.232 72.30.35.10
98.137.246.7 72.30.35.9 2001:4998:c:1023::5 2001:4998:44:41d::3 2001:4998:44:41d::4
2001:4998:58:1836::11 2001:4998:58:1836::10 2001:4998:c:1023::4
rDNS record for 98.138.219.231: media-router-fp1.prod1.media.vip.ne1.yahoo.com
Not shown: 998 filtered ports
PORT   STATE SERVICE
80/tcp  open  http
443/tcp open  https

Nmap done: 3 IP addresses (3 hosts up) scanned in 8.40 seconds
```

comp@comp:~$ sudo nmap -sU google.com facebook.com yahoo.com

```
Starting Nmap 7.01 ( https://nmap.org ) at 2019-04-05 11:54 IST
Nmap scan report for google.com (172.217.166.78)
Host is up (0.00057s latency).
Other addresses for google.com (not scanned): 2404:6800:4009:80d::200e
rDNS record for 172.217.166.78: bom05s15-in-f14.1e100.net
Not shown: 999 open|filtered ports
PORT   STATE  SERVICE
33459/udp closed unknown

Nmap scan report for facebook.com (157.240.24.35)
Host is up (0.00033s latency).
Other addresses for facebook.com (not scanned): 2a03:2880:f12f:83:face:b00c:0:25de
rDNS record for 157.240.24.35: edge-star-mini-shv-01-sin2.facebook.com
All 1000 scanned ports on facebook.com (157.240.24.35) are open|filtered

Nmap scan report for yahoo.com (98.138.219.231)
Host is up (0.00031s latency).
```

```
Other addresses for yahoo.com (not scanned): 98.137.246.8 98.138.219.232 72.30.35.10
98.137.246.7 72.30.35.9 2001:4998:c:1023::5 2001:4998:44:41d::3 2001:4998:44:41d::4
2001:4998:58:1836::11 2001:4998:58:1836::10 2001:4998:c:1023::4
rDNS record for 98.138.219.231: media-router-fp1.prod1.media.vip.ne1.yahoo.com
Not shown: 999 open|filtered ports
PORT   STATE  SERVICE
33459/udp closed unknown

Nmap done: 3 IP addresses (3 hosts up) scanned in 137.63 seconds
```

comp@comp:~$ sudo nmap -sU google.com

```
Starting Nmap 7.01 ( https://nmap.org ) at 2019-04-05 11:57 IST
Nmap scan report for google.com (172.217.166.78)
Host is up (0.00054s latency).
Other addresses for google.com (not scanned): 2404:6800:4009:80d::200e
rDNS record for 172.217.166.78: bom05s15-in-f14.1e100.net
Not shown: 999 open|filtered ports
PORT   STATE  SERVICE
33459/udp closed unknown

Nmap done: 1 IP address (1 host up) scanned in 10.53 seconds
```

EXPERIMENT NO 10

BUFFER OVERFLOW

```
#include <stdio.h>
#include <string.h>
#include <stdlib.h>

void main(int argc, char *argv[])
{
	char buffer[8];

	if (argc < 2)
	{
		printf("strcpy() NOT executed....\n");
		printf("Syntax: %s <characters>\n", argv[0]);
		exit(0);
	}

	strcpy(buffer, argv[1]);
	printf("buffer content= %s\n", buffer);
	printf("strcpy() executed...\n");

}
```

```
divyang@Divyang:~/CSS$ gcc buffer.c

divyang@Divyang:~/CSS$ ./a.out
strcpy() NOT executed....
Syntax: ./a.out <characters>

divyang@Divyang:~/CSS$ ./a.out avsf
buffer content= avsf
strcpy() executed...

divyang@Divyang:~/CSS$ ./a.out avsffdssdf
buffer content= avsffdssdf
strcpy() executed...
*** stack smashing detected ***: <unknown> terminated
Aborted (core dumped)
```