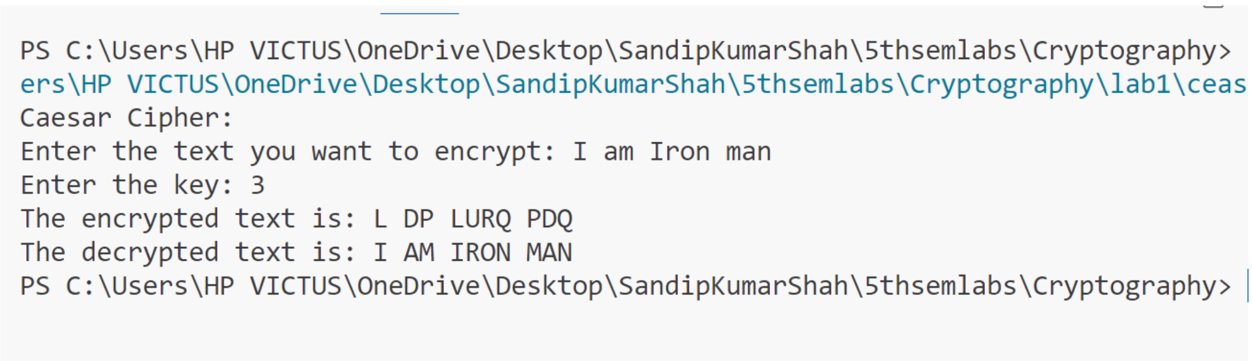
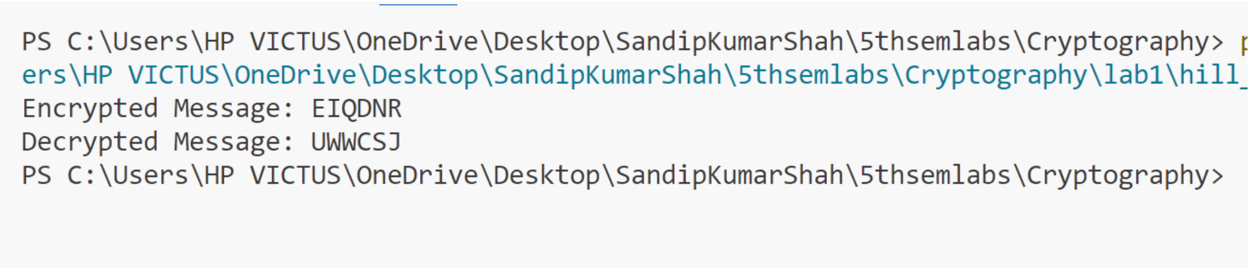
Output Of Caesar Cipher



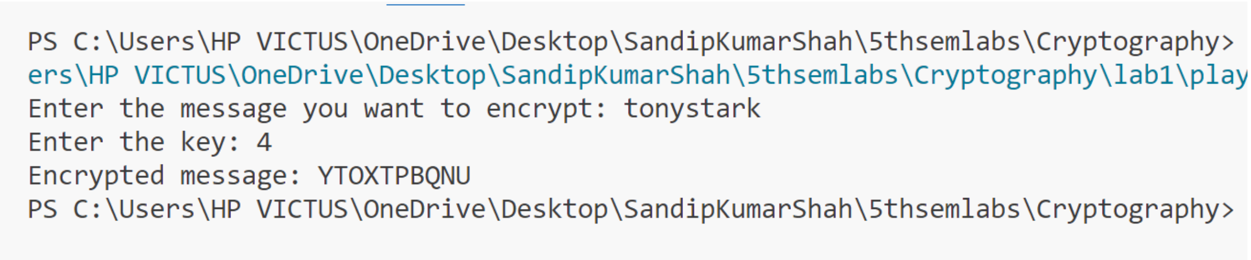
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab1\ceas
Caesar Cipher:
Enter the text you want to encrypt: I am Iron man
Enter the key: 3
The encrypted text is: L DP LURQ PDQ
The decrypted text is: I AM IRON MAN
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of Hill Cipher



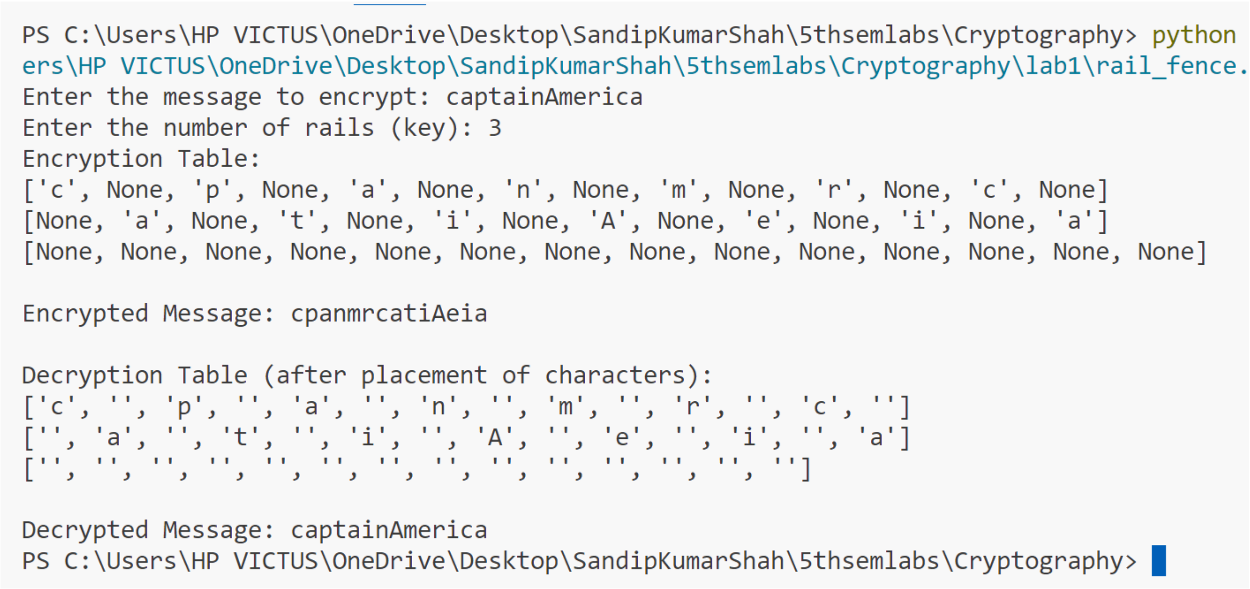
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> p
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab1\hill_
Encrypted Message: EIQDNR
Decrypted Message: UWWCSJ
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of Playfair Cipher



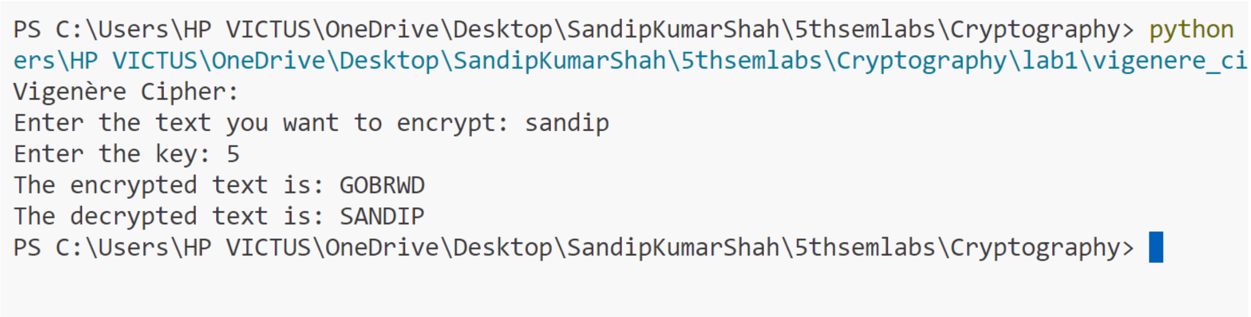
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab1\play
Enter the message you want to encrypt: tonystark
Enter the key: 4
Encrypted message: YTOXTPBQNU
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of Rail fence Cipher



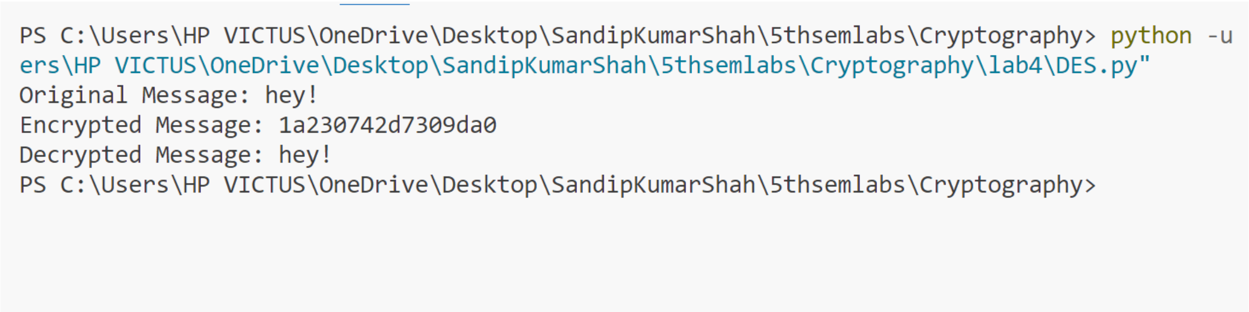
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab1\rail_fence.
Enter the message to encrypt: captainAmerica
Enter the number of rails (key): 3
Encryption Table:
['c', None, 'p', None, 'a', None, 'n', None, 'm', None, 'r', None, 'c', None]
[None, 'a', None, 't', None, 'i', None, 'A', None, 'e', None, 'i', None, 'a']
[None, None, None, None, None, None, None, None, None, None, None, None, None, None]

Encrypted Message: cpanmrcatiAeia

Decryption Table (after placement of characters):
['c', '', 'p', '', 'a', '', 'n', '', 'm', '', 'r', '', 'c', '']
['', 'a', '', 't', '', 'i', '', 'A', '', 'e', '', 'i', '', 'a']
['', '', '', '', '', '', '', '', '', '', '', '', '', '']

Decrypted Message: captainAmerica
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of vigenere cipher



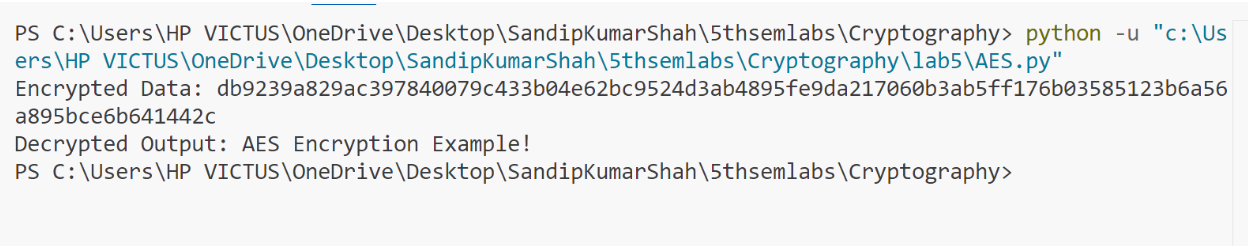
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab1\vigenere_ci
Vigenère Cipher:
Enter the text you want to encrypt: sandip
Enter the key: 5
The encrypted text is: GOBRWD
The decrypted text is: SANDIP
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of DES



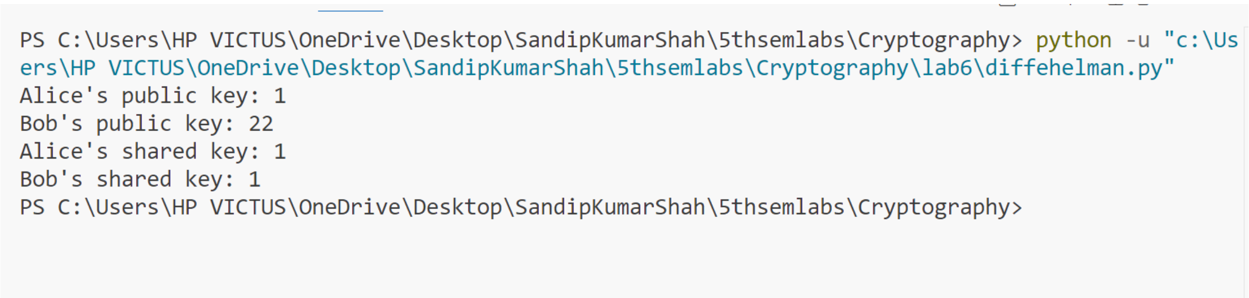
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab4\DES.py"
Original Message: hey!
Encrypted Message: 1a230742d7309da0
Decrypted Message: hey!
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of AES



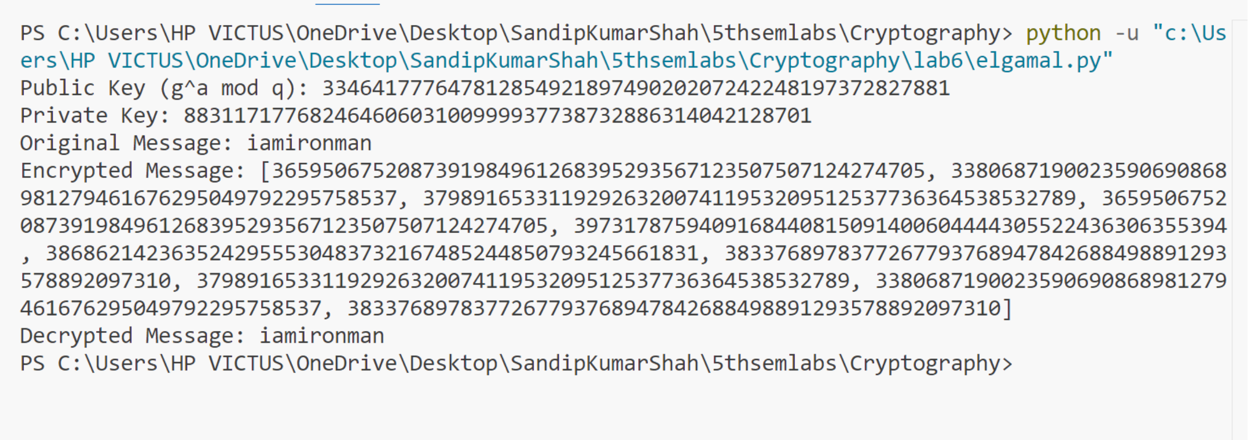
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab5\AES.py"
Encrypted Data: db9239a829ac397840079c433b04e62bc9524d3ab4895fe9da217060b3ab5ff176b03585123b6a56
a895bce6b641442c
Decrypted Output: AES Encryption Example!
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of Deffehelman Algorithm



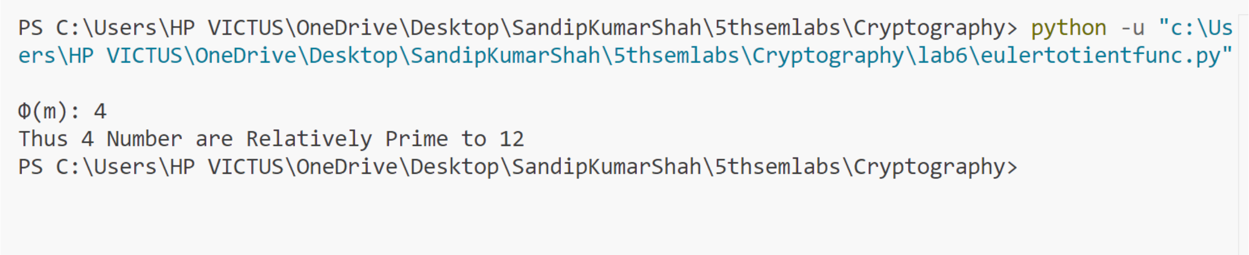
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab6\diffehelman.py"
Alice's public key: 1
Bob's public key: 22
Alice's shared key: 1
Bob's shared key: 1
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of Elgamal Algorithm



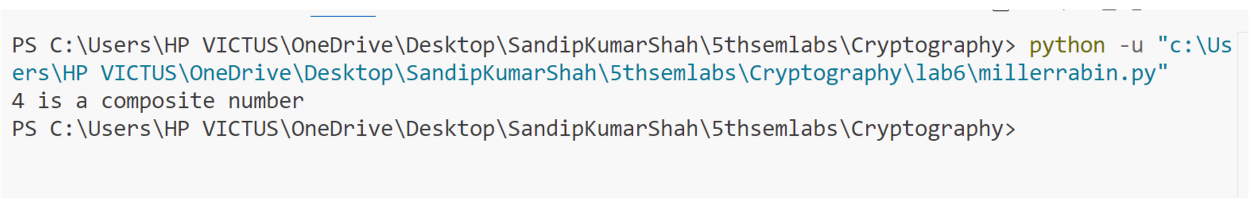
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab6\elgamal.py"
Public Key (g^a mod q): 3346417776478128549218974902020724224819737282788 1
Private Key: 883117177682464606031009999377387328863140421287 01
Original Message: iamironman
Encrypted Message: [365950675208739198496126839529356712350750712427 4705, 33806871900235906908 68
981279461676295049792295758537, 37989165331192926320074119532095125377363645 38532789, 3659506752
087391984961268395293567123507507124274705, 3973178759409168440815091400604444305522436306355394
, 386862142363524295553048373216748524485079324566 1831, 383376897837726779376894784268849889129 3
578892097310, 37989165331192926320074119532095125377363645 38532789, 3380687190023590690868981279
461676295049792295758537, 3833768978377267793768947842688498891293578892097310]
Decrypted Message: iamironman
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of Eulertotient Function



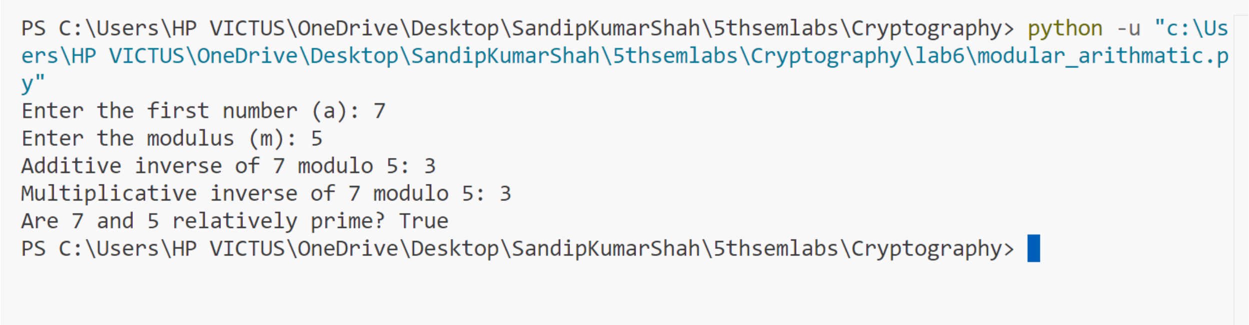
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab6\eulertotientfunc.py"

Φ(m): 4
Thus 4 Number are Relatively Prime to 12
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of Milerrabin



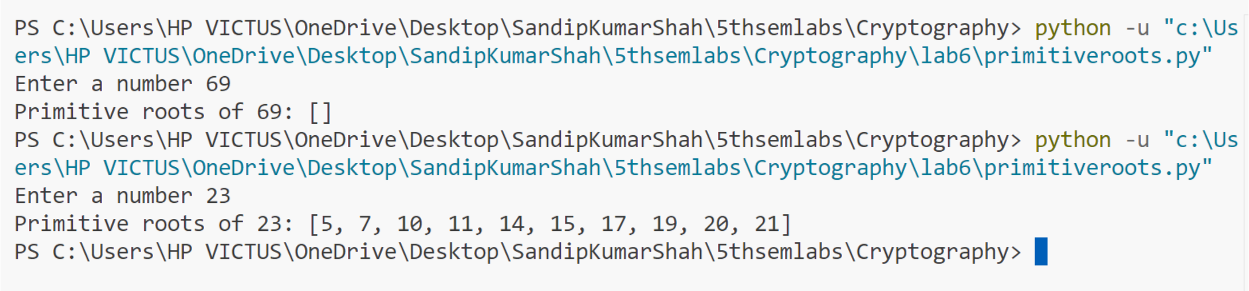
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab6\millerrabin.py"
4 is a composite number
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of Modular_Arithmatics



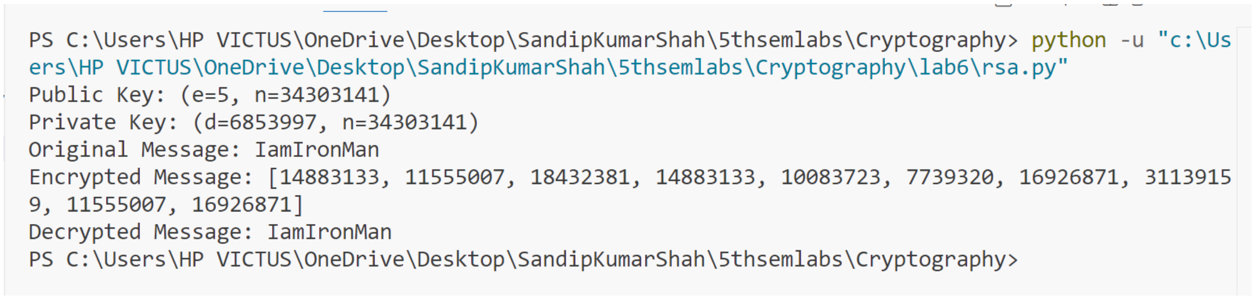
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab6\modular_arithmatic.p
y"
Enter the first number (a): 7
Enter the modulus (m): 5
Additive inverse of 7 modulo 5: 3
Multiplicative inverse of 7 modulo 5: 3
Are 7 and 5 relatively prime? True
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> 
```

Output Of Premitive Roots



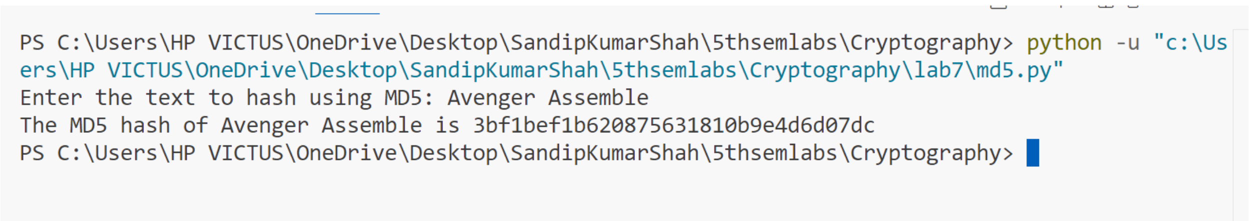
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab6\primitiveroots.py"
Enter a number 69
Primitive roots of 69: []
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab6\primitiveroots.py"
Enter a number 23
Primitive roots of 23: [5, 7, 10, 11, 14, 15, 17, 19, 20, 21]
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of RSA



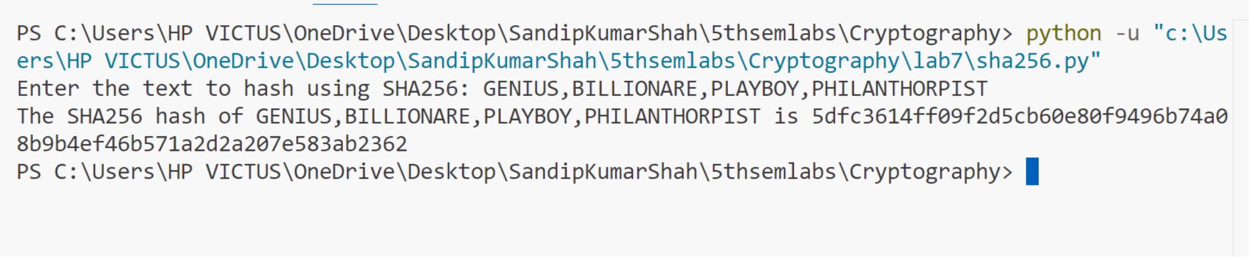
```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab6\rsa.py"
Public Key: (e=5, n=34303141)
Private Key: (d=6853997, n=34303141)
Original Message: IamIronMan
Encrypted Message: [14883133, 11555007, 18432381, 14883133, 10083723, 7739320, 16926871, 3113915
9, 11555007, 16926871]
Decrypted Message: IamIronMan
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```

Output Of Md5



```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab7\md5.py"
Enter the text to hash using MD5: Avenger Assemble
The MD5 hash of Avenger Assemble is 3bf1bef1b620875631810b9e4d6d07dc
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> 
```

Output Of Sha256



```
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography> python -u "c:\Us
ers\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography\lab7\sha256.py"
Enter the text to hash using SHA256: GENIUS,BILLIONARE,PLAYBOY,PHILANTHORPIST
The SHA256 hash of GENIUS,BILLIONARE,PLAYBOY,PHILANTHORPIST is 5dfc3614ff09f2d5cb60e80f9496b74a0
8b9b4ef46b571a2d2a207e583ab2362
PS C:\Users\HP VICTUS\OneDrive\Desktop\SandipKumarShah\5thsemlabs\Cryptography>
```