Input is given for p and q with the constraints that they are two different prime numbers.

**Prime Numbers**

**generate\_keypair**

generate\_keypair is called to create the public and private keys

**Coprime**

“phi” and “e” are computed and to be coprime.

**Modular Multiplicative Inverse**

“d” is calculated using modular multiplicative inverse of e (mod λ(n))

**Keys Returned**

The public key (e, n) and private key (d, n) are returned

**Message**

The message to encrypt is entered through user input

**Cipher Created**

The cipher is created by using modular exponentiation with the public key

**Decryption**

The cipher is then decrypted using the modular multiplicative inverse in the private key.

Group Responsibilities

Josh Kuehn: Coded and tested the program.

Mitchell Higgins: Edited the code and developed flow chart.