# **RSA Algorithm**

RSA algorithm is a public key cryptography or As-symmetric key cryptography.

Text

Description automatically generated

Timeline

Description automatically generated

User-B sends message to User-A.

The hacker knows only the public key.  
The hacker doesn’t know the private key of User-A.  
So, the hacker cannot able to encrypt the cipher text.

Graphical user interface, text, application

Description automatically generated

**Text

Description automatically generated**

**Finding prime factors of large numbers is quite difficult.**

# **Steps Involved**

**Graphical user interface, text

Description automatically generated**

# **Public Key Generation**

**Graphical user interface, text, application

Description automatically generated**

**Text, letter

Description automatically generated**

# **Private Key Generation**

**Graphical user interface, text, application

Description automatically generated**

d 🡪 modulo multiplicative inverse of e and pie(p) \* pie(q)

Graphical user interface, text, application

Description automatically generated

Timeline

Description automatically generated with medium confidence

This is the over-all picture of Private and Public Key generation.

# **Encryption**

Text

Description automatically generated with low confidence

Timeline

Description automatically generated

# **Decryption**

Text

Description automatically generated

Text, timeline

Description automatically generated

When the key size is increased, we can get a secured encryption and standard.

# **Elgamal Algorithm**