

```
<!DOCTYPE html>
<html>
<body>
<input id="msg" placeholder="Enter message">
<button onclick="rsa()">Encrypt & Decrypt</button>
<p id="output"></p>

<script>
function modPow(b, e, m) {
  let r = 1; b %= m;
  while (e > 0) { if (e % 2) r = r * b % m; b = b * b % m; e = Math.floor(e / 2); }
  return r;
}

function rsa() {
  let msg = document.getElementById("msg").value.charCodeAt(0); // take first
  char only
  let p = 3, q = 11, n = p * q, phi = (p - 1) * (q - 1), e = 3, d = 7; // hardcoded small keys
  let enc = modPow(msg, e, n);
  let dec = modPow(enc, d, n);
  document.getElementById("output").innerText = `Encrypted: ${enc}, Decrypted:
  ${String.fromCharCode(dec)}`;
}
</script>
</body>
</html>
```