

File Encryption /Decryption

Source Code: -

HTML/CSS

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
  <title>File Encryption/Decryption Tool</title>
```

```
  <script src="https://cdnjs.cloudflare.com/ajax/libs/crypto-js/4.1.1/crypto-  
js.min.js"></script>
```

```
  <style>
```

```
    * {
```

```
      margin: 0;
```

```
      padding: 0;
```

```
      box-sizing: border-box;
```

```
      font-family: 'Segoe UI', Arial, sans-serif;
```

```
    }
```

```
    body {
```

```
      background: linear-gradient(135deg, rgb(220, 103, 7),white,green);
```

```
      display: flex;
```

```
      justify-content: center;
```

```
      align-items: center;
```

```
      min-height: 100vh;
```

```
      padding: 1rem;
```

```
    }
```

```
.container {  
  background-color: cyan;  
  padding: 2rem;  
  border-radius: 12px;  
  box-shadow: 0 6px 12px rgba(0, 0, 0, 0.15);  
  width: 100%;  
  max-width: 500px;  
  text-align: center;  
}
```

```
h1 {  
  color: #333;  
  margin-bottom: 1.5rem;  
  font-size: 1.8rem;  
  font-weight: 600;  
}
```

```
.form-container {  
  display: flex;  
  flex-direction: column;  
  gap: 1rem;  
}
```

```
input[type="file"] {  
  padding: 0.5rem;
```

```
border: 1px solid #b0bec5;  
border-radius: 6px;  
font-size: 1rem;  
background-color: #f5f5f5;  
}
```

```
input[type="text"] {  
  padding: 0.75rem;  
  border: 1px solid #b0bec5;  
  border-radius: 6px;  
  font-size: 1rem;  
  background-color: #f5f5f5;  
}
```

```
select {  
  padding: 0.75rem;  
  border: 1px solid #b0bec5;  
  border-radius: 6px;  
  font-size: 1rem;  
  background-color: #f5f5f5;  
}
```

```
button {  
  padding: 0.75rem;  
  background-color: #26a69a;  
  color: #ffffff;
```

```
border: none;
border-radius: 6px;
font-size: 1rem;
font-weight: 500;
cursor: pointer;
transition: background-color 0.3s ease;
}
```

```
button:hover {
  background-color: #00897b;
}
```

```
.status {
  margin-top: 1rem;
  color: #333;
  font-size: 0.9rem;
  font-weight: 500;
}
```

```
.status.error {
  color: #d32f2f;
}
```

```
.status.success {
  color: #2e7d32;
}
```

```
@media (max-width: 600px) {
```

```
  .container {
```

```
    padding: 1.5rem;
```

```
    max-width: 90vw;
```

```
  }
```

```
  h1 {
```

```
    font-size: 1.5rem;
```

```
  }
```

```
  input[type="file"], input[type="text"], select, button {
```

```
    font-size: 0.9rem;
```

```
    padding: 0.6rem;
```

```
  }
```

```
}
```

```
@media (min-width: 601px) and (max-width: 900px) {
```

```
  .container {
```

```
    padding: 1.75rem;
```

```
    max-width: 80vw;
```

```
  }
```

```
  h1 {
```

```
    font-size: 1.7rem;
```

```
  }
```

```
        input[type="file"], input[type="text"], select, button {
            font-size: 0.95rem;
        }
    }

    @media (min-width: 901px) {
        .container {
            max-width: 500px;
        }
    }
</style>
</head>
<body>
    <div class="container">
        <h1>File Encryption/Decryption Tool</h1>
        <div class="form-container">
            <input type="file" id="fileInput" accept="*/*">
            <input type="text" id="keyInput" placeholder="Enter
encryption/decryption key">
            <select id="operation">
                <option value="encrypt">Encrypt</option>
                <option value="decrypt">Decrypt</option>
            </select>
            <button onclick="processFile()">Process</button>
        </div>
        <div id="status" class="status"></div>
    </div>
```

JS

<script>

```
async function processFile() {  
    const fileInput = document.getElementById('fileInput');  
    const keyInput = document.getElementById('keyInput');  
    const operation = document.getElementById('operation').value;  
    const status = document.getElementById('status');  
  
    status.textContent = '';  
    status.className = 'status';  
  
    if (!fileInput.files[0]) {  
        status.textContent = 'Please select a file.';  
        status.className = 'status error';  
        return;  
    }  
    if (!keyInput.value.trim()) {  
        status.textContent = 'Please enter a key.';  
        status.className = 'status error';  
        return;  
    }  
  
    const file = fileInput.files[0];  
    const key = keyInput.value;  
  
    try {
```

```
const fileContent = await readFile(file);

let result;
let outputFileName;

if (operation === 'encrypt') {
    result = CryptoJS.AES.encrypt(fileContent, key).toString();
    outputFileName = file.name + '.encrypted';
} else {
    try {
        const bytes = CryptoJS.AES.decrypt(fileContent, key);
        result = bytes.toString(CryptoJS.enc.Utf8);
        if (!result) {
            throw new Error('Decryption failed. Invalid key or corrupted
file.');
```

```
        }
        outputFileName = file.name.replace('.encrypted', '.decrypted');
    } catch (error) {
        status.textContent = 'Decryption failed. Invalid key or corrupted
file.';

        status.className = 'status error';
        return;
    }
}

const blob = new Blob([result], { type: 'text/plain' });
const url = URL.createObjectURL(blob);
```



```
const a = document.createElement('a');
a.href = url;
a.download = outputFileName;
a.click();
URL.revokeObjectURL(url);

status.textContent = `${operation === 'encrypt' ? 'Encryption' :
'Decryption'} successful! File downloaded.`;
status.className = 'status success';
} catch (error) {
status.textContent = 'An error occurred: ' + error.message;
status.className = 'status error';
}
}
function readFile(file) {
return new Promise((resolve, reject) => {
const reader = new FileReader();
reader.onload = () => resolve(reader.result);
reader.onerror = () => reject(reader.error);
reader.readAsText(file);
});
}
</script>
</body>
</html>
```

Images



