

**Git Repo:** <https://github.com/J-Stephens7/medical-bill-translator>

**Demo Video:** <https://youtu.be/vcCTOGrdYBA>

## Test Case Planning

<b>Group members 18</b>	Antoine Turner Ryan Boswell Giovanna Alves James Stephens Josh Epstein
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### 1. Use Case 1 - *Upload and Parse Medical Bill*

<b>Test Case ID</b>	TC01 - Valid file input
<b>Test Objective</b>	The User uploads a valid file type (PNG, JPEG, & PDF), the system correctly uploads the file.
<b>Preconditions</b>	<ul style="list-style-type: none"><li>• The user can open and access the application.</li><li>• The user is on the upload page.</li><li>• The backend and database are active and connected.</li></ul>
<b>Test steps</b>	<ol style="list-style-type: none"><li>1. Open the web application.</li><li>2. Navigate to the Upload File section.</li><li>3. Select a valid file type (PNG, JPEG, or PDF).</li><li>4. Click the Upload button.</li><li>5. Confirm and upload the file.</li></ol>
<b>Input Values</b>	<ol style="list-style-type: none"><li>1. PNG file: MedicalBill.png<ul style="list-style-type: none"><li>a. MedicalBillSideways.png</li><li>b. UnrelatedText.png</li></ul></li><li>2. PDF file: Medical Bill Mock Up.pdf<ul style="list-style-type: none"><li>a. UnrelatedTextNOTextLayer.pdf</li><li>b. UnrelatedTextWithTextLayer.pdf</li></ul></li><li>3. JPEG file: MedicalBill.jpg</li></ol>

<b>Expected results</b>	<ul style="list-style-type: none"> <li>• The system accepts the file and begins processing.</li> <li>• The system transitions to the next file parsing step</li> <li>• The system displays a graphic table of the parsed data</li> <li>• No error messages or warnings are displayed.</li> </ul>
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<b>Test Case ID</b>	TC02 - Invalid file type
<b>Test Objective</b>	<b>The user uploads an invalid file type, the system should not accept it.</b>
<b>Preconditions</b>	<ul style="list-style-type: none"> <li>• The user can open the application.</li> <li>• The user is on the Upload Page</li> </ul>
<b>Test steps</b>	<ol style="list-style-type: none"> <li>1. Open the web application.</li> <li>2. Navigate to the Upload File section.</li> <li>3. Click the Upload File button.</li> <li>4. Select an invalid file type (e.g., .docx file).</li> <li>5. Attempt to upload the file.</li> </ol>
<b>Input Values</b>	Invalid file: TestSample.docx
<b>Expected results</b>	<ul style="list-style-type: none"> <li>• The system displays an error message showing the file type isn't valid</li> <li>• Error: File type not supported (.pdf, .png, .jpg only)</li> <li>• File should not be parsed.</li> </ul>

<b>Test Case ID</b>	TC03 - Invalid file size
<b>Test Objective</b>	<b>Tests if the application can properly handle file sizes that exceed the maximum size</b>
<b>Preconditions</b>	<ul style="list-style-type: none"> <li>• The user can open and access the application</li> <li>• The user is on the Upload Page</li> <li>• The system supports file types .pdf, .png, and .jpg</li> </ul>
<b>Test steps</b>	<ol style="list-style-type: none"> <li>1. Open the web application.</li> <li>2. Navigate to the Upload File section.</li> <li>3. Click the Upload File button.</li> <li>4. Select a valid file type (e.g., .pdf) that exceeds 10 MB in size.</li> <li>5. Attempt to upload the file.</li> </ol>

<b>Input Values</b>	PDF, JPEG, or PNG file containing medical bill information. File must be larger than 10 MB
<b>Expected results</b>	<ul style="list-style-type: none"> <li>The system blocks the upload and does not send the file to the backend.</li> <li>An error message is displayed to the user: ("Error: File size exceeds supported limit (10 MB)")</li> <li>The upload field is reset, allowing the user to select a new file.</li> <li>The file is not uploaded or processed.</li> </ul>

<b>Test Case ID</b>	TC04 - Valid text Input								
<b>Test Objective</b>	<b>Verify that when a user enters valid medical codes and billing information manually, the system correctly parses and displays the results in a table format.</b>								
<b>Preconditions</b>	<ul style="list-style-type: none"> <li>The user can open the application.</li> <li>The user is on the Manual Entry page</li> <li>The database contains the medical codes that will be used in the bill.</li> <li>The input box is active and ready for text entry.</li> </ul>								
<b>Test steps</b>	<ol style="list-style-type: none"> <li>Open the web application</li> <li>Navigate to the Manual Entry Page.</li> <li>Enter valid medical billing text into the text input box</li> <li>Click "Continue to Parsed Table."</li> </ol>								
<b>Input Values</b>	<p>Enter the following:</p> <p>Patient Name: John Doe</p> <p>Date of Service: 10/25/2025</p> <p>Provider: Riverbend Medical Center</p> <table> <thead> <tr> <th>Code</th> <th>Description</th> <th>Charge</th> <th>Dates</th> </tr> </thead> <tbody> <tr> <td>96105</td> <td>Assessment of aphasia</td> <td>\$250.00</td> <td>10/25/2025</td> </tr> </tbody> </table>	Code	Description	Charge	Dates	96105	Assessment of aphasia	\$250.00	10/25/2025
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96105	Assessment of aphasia	\$250.00	10/25/2025						

	97755 Assistive technology assessment	\$300.00	10/25/2025
	90912 Biofeedback training (first 15 min)	\$180.00	10/26/2025
	90913 Biofeedback training (each addl 15 min)	\$150.00	10/26/2025
	78300 Bone imaging (limited area)	\$275.00	10/27/2025
	78306 Bone imaging (whole body)	\$400.00	10/27/2025
	77061 Breast tomosynthesis (one breast)	\$350.00	10/27/2025
	77062 Breast tomosynthesis (both breasts)	\$450.00	10/27/2025
	75557 Cardiac MRI (without contrast dye)	\$900.00	10/28/2025
	75561 Cardiac MRI (with contrast dye)	\$975.00	10/28/2025
	Total Amount: \$4,230.00		
	Insurance Coverage: 80%		
	Patient Responsibility: \$846.00		
<b>Expected results</b>	<ul style="list-style-type: none"> <li>The system should be able to successfully parse the text and verify that each of them exists within the database.</li> <li>A parsed table appears showing the codes and details</li> <li>Displays parsed codes in a results table with date, code, and amount.</li> </ul>		

<b>Test Case ID</b>	TC05 - Invalid medical code
<b>Test Objective</b>	Verify that the system correctly identifies and handles medical codes that do not exist or are invalid, and provides an appropriate error message to the user
<b>Preconditions</b>	<ul style="list-style-type: none"> <li>The user can open the application</li> <li>The user is on the medical code input page or upload form.</li> <li>The database of valid CPT codes is loaded and accessible.</li> </ul>
<b>Test steps</b>	<ol style="list-style-type: none"> <li>Navigate to the code entry or upload section.</li> </ol>

	<p>2. Enter an invalid medical code (e.g., "ABCDE") manually or upload a bill containing an invalid code.</p> <p>3. Submit the code or bill for processing.</p>																																																
<b>Input Values</b>	<p>File Upload: Incorrect Codes Medical Bill Mock Up.pdf</p> <p>Manual Text:</p> <p>Enter the following text: Patient Name: Jane Smith</p> <p>Date of Service: 10/25/2025</p> <p>Provider: Hillside Health Center</p> <table> <thead> <tr> <th>Code</th> <th>Description</th> <th>Charge</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>96105</td> <td>Assessment of aphasia</td> <td>\$250.00</td> <td>10/24/2025</td> </tr> <tr> <td>97755</td> <td>Assistive technology assessment</td> <td>\$300.00</td> <td>10/25/2025</td> </tr> <tr> <td>AAAA1</td> <td>Invalid sample code</td> <td>\$200.00</td> <td>10/25/2025</td> </tr> <tr> <td>78300</td> <td>Bone imaging (limited area)</td> <td>\$275.00</td> <td>10/25/2025</td> </tr> <tr> <td>99999</td> <td>Placeholder fake code</td> <td>\$125.00</td> <td>10/25/2025</td> </tr> <tr> <td>77062</td> <td>Breast tomosynthesis (both breasts)</td> <td>\$450.00</td> <td>10/25/2025</td> </tr> <tr> <td>XYZ12</td> <td>Nonexistent code for error test</td> <td>\$300.00</td> <td>10/26/2025</td> </tr> <tr> <td>75561</td> <td>Cardiac MRI (with contrast dye)</td> <td>\$975.00</td> <td>10/26/2025</td> </tr> <tr> <td colspan="4">Total Amount: \$2,875.00</td></tr> <tr> <td colspan="4">Insurance Coverage: 75%</td></tr> <tr> <td colspan="4">Patient Responsibility: \$718.75</td></tr> </tbody> </table>	Code	Description	Charge	Date	96105	Assessment of aphasia	\$250.00	10/24/2025	97755	Assistive technology assessment	\$300.00	10/25/2025	AAAA1	Invalid sample code	\$200.00	10/25/2025	78300	Bone imaging (limited area)	\$275.00	10/25/2025	99999	Placeholder fake code	\$125.00	10/25/2025	77062	Breast tomosynthesis (both breasts)	\$450.00	10/25/2025	XYZ12	Nonexistent code for error test	\$300.00	10/26/2025	75561	Cardiac MRI (with contrast dye)	\$975.00	10/26/2025	Total Amount: \$2,875.00				Insurance Coverage: 75%				Patient Responsibility: \$718.75			
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<b>Expected results</b>	The system does not crash and displays “unknown procedure” next to the code.
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