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| **MFR-01** | **Name of Requirement: Register and Authenticate Users** |
| **Criticality: High** | **I/O: User input for registration; System output as user profile creation and login confirmation.** |
| **Priority: 6/10** | |
| **Description: The system must provide a secure registration form for new users and a login mechanism for returning users. It should feature encryption for password storage and verification processes to prevent unauthorized access.** | |
| **Dependencies: Secure authentication service/library and user database integration** | |
| **Cost: None** | |
| **Schedule: 2 days** | |
| **Technical Issues: Ensuring compatibility between our database and the secure authentication service/library.** | |

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| **MFR-02** | **Name of Requirement: Provide Story Creation Interface** |
| **Criticality: HIGH** | **I/O: User input for story criteria** |
| **Priority: 8/10** | |
| **Description: An interface must be provided for users to select age, language, genre, artwork style, and input a story prompt.** | |
| **Dependencies: N/A** | |
| **Cost: None** | |
| **Schedule: 1 day** | |
| **Technical Issues: NONE** | |

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| **MFR-03** | **Name of Requirement: Process and Validate Inputs** |
| **Criticality: High** | **I/O: User inputs; System output as validated parameters for story generation** |
| **Priority: 8/10** | |
| **Description: The system must accurately process and validate user inputs, ensuring they are in the correct format for the AI algorithms to interpret and use for story generation. The system also should run the text input (story prompt) against a profanity filter. It should prompt users to correct any invalid or incomplete inputs.** | |
| **Dependencies: Robust backend validation logic; Profanity filter dictionary/list/library. MFR-02** | |
| **Cost: None** | |
| **Schedule: 1 day** | |
| **Technical Issues: Options to be selected should be limited to drop downs.** | |

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| **MFR-04** | **Name of Requirement: Generate Stories via AI** |
| **Criticality: High** | **I/O: Structured data from user inputs; System output as a complete, unique story** |
| **Priority: 10/10** | |
| **Description: The AI must generate a story based on the structured input, crafting a narrative that is coherent and engaging. The story should reflect the user's preferences and input while maintaining age-appropriate content.** | |
| **Dependencies: Generative AI’s APIs.** | |
| **Cost: High** | |
| **Schedule: 2 days** | |
| **Technical Issues: Aligning the AI output with user expectations** | |

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| **MFR-05** | **Name of Requirement: Generate Images via AI** |
| **Criticality: High** | **I/O: Image prompts from story generation; System output as relevant and cohesive images.** |
| **Priority: 10/10** | |
| **Description: Upon receiving image prompts from the AI-generated story, the system must generate corresponding images that match the narrative and style requested by the user, ensuring visual harmony with the story content.** | |
| **Dependencies: AI image generation service; MFR-04** | |
| **Cost: Very High** | |
| **Schedule: 2 days** | |
| **Technical Issues: Ensuring image relevance and appropriateness. Cost is very high for testing.** | |

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| **MFR-06** | **Name of Requirement: Support Multilingual Story Generation** |
| **Criticality: Medium** | **I/O: Language selection; System output as a story in the selected language.** |
| **Priority: 9/10** | |
| **Description: The system must be capable of generating stories in multiple languages, allowing users to select their preferred language. It should ensure linguistic accuracy and cultural relevance in all supported languages.** | |
| **Dependencies: Multilingual AI models and language databases.** | |
| **Cost: High** | |
| **Schedule: 1 day** | |
| **Technical Issues: Ensuring the accuracy of language models and cultural nuances.** | |

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| **MFR-07** | **Name of Requirement: Assemble and Store Content** |
| **Criticality: High** | **I/O: Generated story text and images; System output as a compiled HTML file.** |
| **Priority: 9/10** | |
| **Description: The system must compile the generated story text and images into a paginated HTML file format that can be readily viewed in a web browser. It should then store this HTML file and associated images in a designated server or cloud storage space.** | |
| **Dependencies: Local Storage OR Reliable storage solution with backup and retrieval capabilities** | |
| **Cost: Low** | |
| **Schedule: 1 week** | |
| **Technical Issues: Managing storage scaling as user base grows.** | |

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| **MFR-08** | **Name of Requirement: Facilitate User Interaction with Content** |
| **Criticality: High** | **I/O: Generated HTML content; System output as an interactive book viewable in the browser.** |
| **Priority: 8/10** | |
| **Description: Once a story is generated, the user should be redirected to view their book in an interactive format within the web browser, with functionalities such as page turning and text size adjustments for enhanced readability.** | |
| **Dependencies: Web development frameworks and libraries for interactivity.** | |
| **Cost: Low** | |
| **Schedule: 1 week** | |
| **Technical Issues: Ensuring cross-platform compatibility and responsive design.** | |

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| **MFR-09** | **Name of Requirement: Basic Accessibility Features** |
| **Criticality: Medium** | **I/O: Accessibility preferences; Adjusted content display output.** |
| **Priority: 7/10** | |
| **Description: Implement accessibility features, such as increasing/decreasing font size or changing the font style.** | |
| **Dependencies: N/A** | |
| **Cost: None** | |
| **Schedule: 2 days** | |
| **Technical Issues: Integrating features without compromising existing functionality.** | |

OPTIONAL FUNCTIONAL REQUIREMENTS

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| **OFR-01** | **Name of Requirement: Content Flagging** |
| **Criticality: Medium** | **I/O: Review and Flag Content** |
| **Priority: 6/10** | |
| **Description: Users should be able to flag any generated content they find inappropriate. The system should log this event, notify administrators, and initiate a review process.** | |
| **Dependencies: N/A** | |
| **Cost: None** | |
| **Schedule: N/A** | |
| **Technical Issues:** | |

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| **OFR-02** | **Name of Requirement: Content Moderation by Admin** |
| **Criticality: Medium** | **I/O: Admin commands; System output as actions on content and user data.** |
| **Priority: 6/10** | |
| **Description: Admins should have the ability to manage, search, and filter all books created, view detailed information, and delete any content or user accounts if necessary. This functionality must be secure and audit-able.** | |
| **Dependencies: Admin dashboard interface, secure access controls.** | |
| **Cost:** | |
| **Schedule:** | |
| **Technical Issues: Implementing comprehensive admin controls without affecting system availability and integrity.** | |

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| **OFR-03** | **Name of Requirement: Enhance Accessibility Features** |
| **Criticality: Low** | **I/O: Accessibility preferences; Adjusted content display output.** |
| **Priority: 4/10** | |
| **Description: Implement and progressively improve accessibility features, such as high-contrast modes, and text-to-speech. The system must meet international accessibility standards and be user-friendly.** | |
| **Dependencies: Accessibility libraries and compliance standards; TTS engine or SaaS; MFR-04** | |
| **Cost: High** | |
| **Schedule: N/A** | |
| **Technical Issues: Integrating features without compromising existing functionality.** | |

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| **OFR-04** | **Name of Requirement: Download Story Books as PDFs** |
| **Criticality: Low** | **I/O: User clicks the button to download; System output as a PDF file of the storybook.** |
| **Priority: 4/10** | |
| **Description: The system shall provide users the functionality to download their personalized storybooks in PDF format. This feature will convert the HTML storybook into a downloadable PDF, preserving the layout, images, and text as presented online.** | |
| **Dependencies: PDF generation library, file conversion service integration.** | |
| **Cost: Low** | |
| **Schedule: N/A** | |
| **Technical Issues: Ensuring high fidelity in the conversion from HTML to PDF, maintaining interactive elements and accessibility features in the PDF format.** | |