**PenPaperRPG**

**PLAYER'S HANDBOOK**

*Pathfinder 2e Remaster Character Creator*

Version 0.1.0

October 2025

# **TABLE OF CONTENTS**

1. Introduction

2. What is PenPaperRPG?

3. Features Overview

4. Character Creation Wizard

5. Character Export System

6. Content Library

7. Technical Architecture

8. Getting Started

9. Future Enhancements

# **1. INTRODUCTION**

Welcome to PenPaperRPG, a comprehensive digital toolkit for creating and managing Pathfinder 2e Remaster characters. This handbook provides complete documentation of the project, its features, and capabilities.

PenPaperRPG transforms the complex process of Pathfinder 2e character creation into an intuitive, step-by-step wizard that guides players through every decision while automatically calculating all statistics, proficiencies, and derived values according to official Pathfinder 2e Remaster rules.

# **2. WHAT IS PENPAPERRPG?**

PenPaperRPG is a modern web application and desktop tool designed for Pathfinder 2e Remaster players and Game Masters. The project consists of:

**• Interactive Character Creator**

A 9-step wizard that guides users through ancestry, heritage, background, class, abilities, feats, skills, equipment, and review.

**• Professional Export System**

Export completed characters to PDF (multi-page professional), Excel (with dynamic formulas), or Word (formatted document).

**• Content Catalog System**

YAML-based content library with 341 validated entities including ancestries, classes, backgrounds, feats, spells, and items.

**• Rules Engine**

Automated calculation of ability modifiers, proficiency bonuses, saving throws, skill modifiers, and all derived statistics.

**• Desktop Application**

Electron-based desktop app with local file management and offline capability (in development).

# **3. FEATURES OVERVIEW**

PenPaperRPG provides a complete character creation and management experience:

|  |  |  |
| --- | --- | --- |
| **FEATURE** | **STATUS** | **DESCRIPTION** |
| Ancestry Selection | ✓ Complete | 29 ancestries with traits and abilities |
| Heritage Selection | ✓ Complete | 31 heritages across all ancestries |
| Background Selection | ✓ Complete | 12 backgrounds with skill training |
| Class Selection | ✓ Complete | 11 classes with full proficiencies |
| Ability Score Assignment | ✓ Complete | Interactive boost resolution system |
| Feat Selection | ✓ Complete | Ancestry and class feats at level 1 |
| Skill Training | ✓ Complete | Choose trained skills by class |
| Equipment Purchase | ✓ Complete | 26 items with wealth & bulk tracking |
| Character Review | ✓ Complete | Complete sheet display |
| Professional Export | ✓ Complete | PDF, Excel, Word formats |

# **4. CHARACTER CREATION WIZARD**

The character creation wizard guides players through 9 steps, automatically calculating all statistics according to Pathfinder 2e Remaster rules:

**Step 1: Ancestry**

Choose from 29 ancestries (Human, Elf, Dwarf, etc.). Each provides hit points, size, speed, ability boosts/flaws, and special abilities.

**Step 2: Heritage**

Select your character's heritage based on chosen ancestry. 31 heritages provide additional traits and abilities.

**Step 3: Background**

Pick from 12 backgrounds that grant ability boosts, skill training, and a background feat.

**Step 4: Class**

Choose from 11 classes (Fighter, Wizard, Cleric, etc.). Determines hit points per level, proficiencies, and class features.

**Step 5: Ability Scores**

Resolve ability boosts from ancestry, background, class, and 4 free boosts. All ability modifiers calculated automatically.

**Step 6: Feats**

Select 1 ancestry feat and 1 class feat appropriate for level 1. Spellcasters also choose starting spells.

**Step 7: Skills**

Train skills based on your class. Each trained skill gains +2 proficiency bonus plus level.

**Step 8: Equipment**

Purchase starting equipment with 15 gp. Track wealth, bulk, and encumbrance automatically.

**Step 9: Review & Export**

Review complete character sheet with all calculated statistics. Export to PDF, Excel, or Word.

# **5. CHARACTER EXPORT SYSTEM**

The export system generates professional character sheets in three formats, each optimized for different use cases:

|  |  |
| --- | --- |
| **FORMAT** | **FEATURES** |
| PDF | Multi-page professional layout • Gold-themed sections • Print-ready format • 462 lines of Python using reportlab Platypus • All 13+ character sections |
| Excel | DYNAMIC FORMULAS (not hardcoded!) • Blue inputs auto-update black formulas • Change STR 16→18 and Athletics recalculates instantly • 405 lines of Python using openpyxl • 7 sheets with cross-references |
| Word | Formatted document with tables • Professional OOXML structure • Compatible with Word 2007+, LibreOffice, Google Docs • 633 lines of JavaScript using docx library |

**All Character Sections Included:**

• Character Identity (ancestry, heritage, background, class, deity, alignment)

• Ability Scores (scores and calculated modifiers)

• Core Statistics (HP, AC, Class DC, Perception, Speed)

• Saving Throws (Fortitude, Reflex, Will with proficiency bonuses)

• Skills (all 16 skills with ability, modifier, rank)

• Lore Skills (custom knowledge skills)

• Weapon & Armor Proficiencies

• Languages & Senses

• Feats & Features (with level and source)

• Spellcasting (tradition, DC, slots, prepared spells)

• Equipment (items with quantity, bulk, invested)

• Attack Profiles (weapon, bonus, damage, traits)

• Resistances, Weaknesses, Immunities

• Character Notes (appearance, backstory, allies, campaigns)

# **6. CONTENT LIBRARY**

The catalog system contains 341 validated entities from the Pathfinder 2e Remaster rules:

|  |  |  |
| --- | --- | --- |
| **CONTENT TYPE** | **COUNT** | **EXAMPLES** |
| Ancestries | 29 | Human, Elf, Dwarf, Halfling, Gnome, Goblin, Orc... |
| Heritages | 31 | Versatile Human, Ancient Elf, Mountain Dwarf... |
| Backgrounds | 12 | Acolyte, Criminal, Scholar, Warrior... |
| Classes | 11 | Fighter, Wizard, Cleric, Rogue, Ranger, Bard... |
| Feats | 88 | Power Attack, Sudden Charge, Nimble Dodge... |
| Spells | 75 | Magic Missile, Heal, Fireball, Shield... |
| Items | 95 | Longsword, Chain Mail, Healing Potion... |
| Equipment (Starting) | 26 | 9 weapons, 7 armor, 10 adventuring gear |
| TOTAL | 341 | All validated with Zod schemas |

All content is stored in YAML format and validated against TypeScript schemas using Zod. The catalog build system ensures data integrity and provides detailed error reporting.

# **7. TECHNICAL ARCHITECTURE**

PenPaperRPG is built as a modern monorepo using cutting-edge web technologies:

|  |  |
| --- | --- |
| **COMPONENT** | **TECHNOLOGY** |
| Monorepo | Turborepo + pnpm workspaces |
| Web Application | Next.js 14 with App Router, React Server Components |
| Desktop Application | Electron 31 with IPC bridge |
| Type Safety | TypeScript 5.9 + Zod validation schemas |
| Content System | YAML-based catalog with build-time validation |
| Rules Engine | @pen-paper-rpg/engine package |
| PDF Export | Python + reportlab Platypus |
| Excel Export | Python + openpyxl with formula support |
| Word Export | Node.js + docx (OOXML generation) |
| State Management | React hooks + localStorage persistence |

**Shared Packages:**

• @pen-paper-rpg/schemas - Zod validation schemas for all game entities

• @pen-paper-rpg/catalog - Content loading, validation, and indexing

• @pen-paper-rpg/engine - Rules calculations and character state management

# **8. GETTING STARTED**

**Web Application:**

1. Install dependencies: pnpm install

2. Build packages: pnpm run build

3. Start development server: pnpm dev

4. Navigate to http://localhost:3000/character/create

5. Follow the 9-step wizard to create your character

6. Export your completed character in the format you prefer

**Desktop Application:**

1. Build desktop app: pnpm --filter desktop build

2. Start desktop app: pnpm --filter desktop dev

3. The app will open automatically with the character creator loaded

4. Packs directory: Documents/PenPaperRPG/packs (auto-created)

**Export Dependencies:**

Python packages: pip install reportlab openpyxl

Node packages: pnpm add docx (already installed)

# **9. FUTURE ENHANCEMENTS**

Planned features for future releases:

**Leveling System**

• Level-up wizard interface (levels 2-20)

• Additional feat and ability boost selection

• Class feature progression tracking

• Skill rank increases

**Advanced Character Features**

• Spell preparation interface for prepared casters

• Focus spell tracking

• Companion and familiar support

• Archetype integration

**Content Expansion**

• Additional ancestries (versatile heritages, rare ancestries)

• More classes (Alchemist, Monk, Investigator, etc.)

• Advanced backgrounds

• Extended equipment catalog (magic items, consumables)

• Comprehensive spell library

**User Experience**

• Character library (save/load multiple characters)

• Cloud storage integration

• Character sharing via URL

• Print-optimized character sheets

• Mobile-responsive design

**Gameplay Support**

• In-play character sheet (HP and resource tracking)

• Dice roller integration

• Campaign management tools

• Party composition and balance tools

# **APPENDIX: PROJECT STATISTICS**

|  |  |
| --- | --- |
| **METRIC** | **VALUE** |
| Total Features Implemented | 10 (Complete Character Creator) |
| Catalog Entities | 341 validated items |
| Export Formats | 3 (PDF, Excel, Word) |
| PDF Generator | 462 lines of Python |
| Excel Generator | 405 lines of Python with formulas |
| Word Generator | 633 lines of JavaScript |
| Wizard Steps | 9 (Ancestry → Export) |
| Skills | 16 core + custom lore skills |
| Sprints Completed | 4 (Feats, Heritage, Equipment, Export) |

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**Thank you for using PenPaperRPG!**

*For support and updates, visit github.com/anthropics/pen-paper-rpg*