

# Product Requirements Document (PRD)  
\*\*Product Name:\*\* Nautical Rules – Quiz & Study Aide  
\*\*Owner:\*\* [Your Name]  
\*\*Version:\*\* 1.0  
\*\*Date:\*\* [Insert Date]

## ## 1. Overview

\*Nautical Rules – Quiz & Study Aide\* is designed to help mariners and students prepare for the U.S. Coast Guard Rules of the Road exam. It provides a comprehensive study and quiz experience that functions entirely offline, enabling users to practice anywhere — including offshore environments without internet access.

## ## 2. Goals & Objectives

- Deliver a reliable offline training tool for maritime professionals.
- Support adjustable quiz lengths to align with user study goals.
- Provide immediate learning reinforcement with answer explanations.
- Allow users to track their learning progress through review history.
- Offer a study mode for full question bank review and memorization.

## ## 3. Key Features

### ### 3.1 Offline Functionality

All necessary data stored locally — works at sea with no WiFi or cellular.

### ### 3.2 Quiz Mode

- User selects number of questions (e.g., 10 / 25 / 50 / 100 or full bank).
- Each question displays text, 4 answer choices, and optional illustration.
- Incorrect answers show the correct answer + explanation.
- Final score only visible after all questions completed.

### ### 3.3 Study Mode

Randomized continuous review of the full question bank with answers and explanations visible.

### ### 3.4 Review Section

- Stores and displays historical quiz performance.
- Shows score, missed questions, user answers, correct answers, and explanations.
- Allows users to retake full quizzes or just missed questions.

### ### 3.5 Question Bank Support

- Import via Excel (.xlsx) or CSV (.csv).
- Fields: Question ID, Text, Answers (A/B/C/D), Correct Answer, Explanation, Optional Image Filename.

## ## 4. Technical Requirements

Requirement	Description
----- -----	
Platform	iOS + Android
Offline Storage	All content stored locally in app files
Data Architecture	SQLite or local database for questions & quiz history
Image Support	Local image assets referenced in database
Scoring	Percentage + count displayed at quiz end

| Language | English (Phase 1) |  
| Framework | Flutter or React Native recommended |

## ## 5. UX / Navigation Flow

**\*\*Home Screen:\*\***

- Start Quiz
- Study Mode
- Review Past Tests
- Settings

**\*\*Quiz Flow:\*\***

1. Select number of questions
2. Navigate question-by-question
3. Receive explanations only when wrong
4. View results summary at end

**\*\*Study Flow:\*\***

- Random display of questions with answers shown immediately

**\*\*Review Flow:\*\***

- Quiz log view → drilldown → question-by-question review

## ## 6. Future Enhancements

- Timed quiz mode
- Personalized study lists (Flag/Favorite feature)
- Analytics dashboards (score trends, category breakdowns)
- Cloud backup/restore for fleet training environments