

# FEATURE SPECIFICATIONS

## Pelesys Exam Generation System

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**Table of Contents**

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1 Summary .....3  
1.1 Introduction ..... 3  
1.2 The Question Module .....3  
1.3 The Exam Module .....4  
2 Software And Hardware Requirements .....7

## 1 Summary

### 1.1 Introduction

The Pelesys Exam Generator is a fully web-based examination and qualification solution. It consists of two core components: the *Question Module* and the *Exam Module*. The Question Module allows you to populate and manage a question database. Based on the questions in the database, the Exam Module allows you to create exam structures and generate exam files (assignable units and SCOs).

*Platform:* The Pelesys Exam Generator is developed using the latest Microsoft .Net platform. The tool is tightly integrated with the Pelesys LMS and can also be used as an independent exam creation tool.

*AICC and SCORM Compliant:* The Pelesys Exam Generator is designed according to the AICC and SCORM CMI guidelines.

*Graphic User Interface:* The Pelesys Exam Generator has a user-friendly, fully web-based user interface.

*Unlimited Access:* The Pelesys Exam Generator can be accessed via an Internet browser anywhere, any time.

### 1.2 The Question Module

Below is the feature summary of the question module.

*Grouping:* Questions in the database are grouped and sorted by topics and sub-topics.

*Question Types:* The Pelesys system supports both test and survey questions.

The following question types are supported: multiple choices, multiple responses, yes/no, true/false, hot spot, fill in the blank, and numeric.

Multiple Choice	The participant answers by selecting an answer from a list of two or more choices. Up to ten (10) choices may be defined.
Multiple Response	The participant answers by selecting multiple answers from a list of two or more choices.
True/False	A special form of Multiple Choice question in which “True” and “False” are supplied as default choices.
Yes/No	A special form of Multiple Choice question in which “Yes” and “No” are supplied as default choices.

Fill-in the Blank      The participant enters text in a text entry fields.

Numeric      The participant enters a number in a text entry field.

All questions can contain graphics. Each question can have feedback to be presented when a correct or incorrect choice is selected by the user. A reference label for each question can also be provided (for example, the volume / chapter / page numbers of your flight manual).

Question Usage: You may specify the maximum number of times a question can be used in exams or surveys. You may also deactivate a question if the question is deemed as not suitable. All questions must be approved before it can be used in any of the exams or surveys.

Difficulty Levels: A difficulty level can be assigned to the questions.

Meta-Tagging: The questions can be meta-tagged for advanced search and filtering.

Advanced Search: The questions can be retrieved in many ways: by topic, sub-topic, title, type, keyword, difficulty level, author or any combination of the above.

Test Trial: The questions can be tested using different templates.

Question Analysis: An analysis of student performance can be conducted at any time. The user performance data is collected and stored in the LMS database and the Exam Generator will be able to extract the information and provide a user performance summary.

## 1.3 The Exam Module

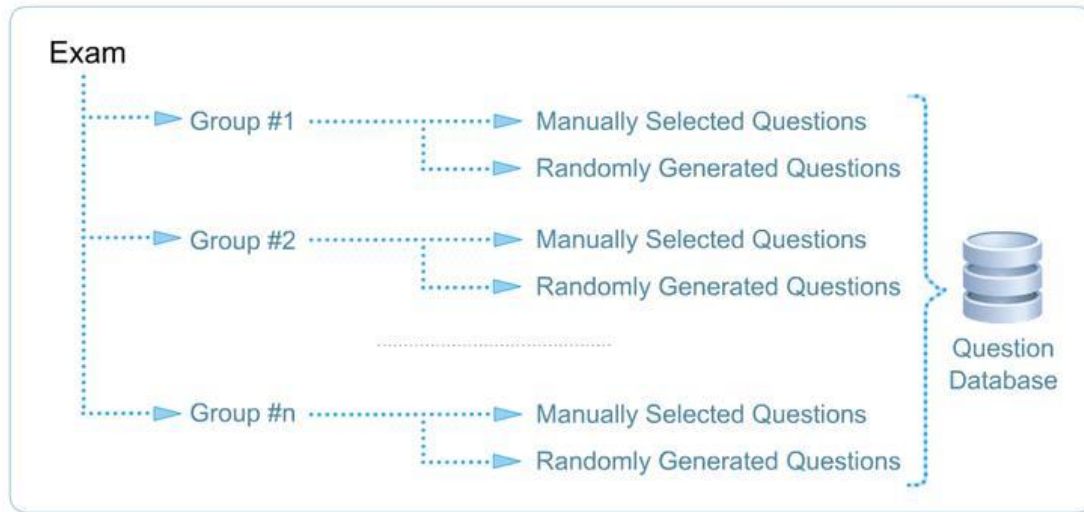
The Exam Module may be utilized to create exams and surveys, using questions that have been previously employed and approved. The Exam Module may be used to design and create an exam that meets your exact examination requirements. Below is the feature summary of the Exam Module.

### Exam Structure

An exam consists of groups (or subjects) of questions.

Each group typically covers one subject and contains sequentially structured questions.

Each question group may contain mandatory questions or questions that have been randomly selected from a topic in the Question database. The questions may be selected based on difficulty level, keywords, and other criteria. Only the approved questions may be used in an exam.



Student exam progression can be controlled in a variety of ways:

Sequence: Users may be allowed to jump between questions. Alternatively, they will be forced to proceed as the questions are presented.

Question Order: The questions may be presented in fixed or random order, no matter whether the questions are manually selected or randomly generated in real time.

Random Distracters: The question distracters (choices) can be randomized.

Resuming Exams: You may allow (or disallow) the user to take a break and resume an exam.

Exam Re-entry: You may allow (or disallow) the user to enter an exam again after the user has completed it.

Scoring: You may specify the mastery score for an exam. By default, the mastery score is 100%.

Time Allowed: You may specify how much time each user is allowed to spend in an exam.

Font, Size & Color: You may specify the font, size and color of questions in an exam.

Test Results: Test results can be printed or emailed.

Weight: You may assign a weight for each question group in an exam.

Previewing Exams: You may try out an exam before publishing or exporting it, using different templates.

Other features include:

Exporting: You can export an exam directly into the Pelesys LMS or package for another system to use.

Debriefing Exams: The instructors can debrief an exam with a student user. This option allows the instructor to play back the exam exactly the way the student user did.

Paper Version: A paper version of an exam can be printed so that the exam can be taken off-line.

Analysis Tools: The Exam Generator allows the administrator to conduct analysis on how the exams and questions were used.

Regulatory Requirements: The Exam Generator generates exams that will meet regulatory (e.g. JAA & FAA) requirements.

## 2 Software and Hardware Requirements

Item #	Features	Details
1	Minimum client hardware requirement	Intel Pentium IV 800 MHz, 512Mb RAM, and adequate HDD space.
2	Minimum server hardware requirement	Intel Pentium IV 1GHz CPU, 1GB memory, adequate hard disk space and internet connection.
3	Internet connection requirement for the user computer	56 K or better connection.
4	Server software requirement	Windows Server 2003, 2008 using Microsoft Internet Information Services (IIS).
5	Client operating system	Operate in Windows 2000/XP/Vista/7
6	Supported internet browsers	Microsoft IE 6.0 or later. FireFox 3.5.
7	Browser plug-ins required	Adobe Flash Player