FileMaker Exam Overview

FileMaker 13 Certification

The following information describes the development process for the FileMaker 13 Certification exam, followed by key topic areas that are covered in the exam.

Exam Development Process

The procedures followed to develop the FileMaker Developer exam substantially conforms to industry standards designed to provide the highest level of exam validity and reliability. These standards were jointly established by the National Council for Measurement in Education (NCME), the American Psychological Association (APA) and the American Educational Research Association (AERA). These are the standards to which many high-stakes (certification) exams are measured to ensure legal defensibility.

JTA

The development of the FileMaker exam begins with a full Job-Task Analysis (JTA), which is a procedure to identify all of the knowledge, skills, abilities, and judgments (KSAJs) that are critical and necessary within the specified domains. A test definition document is also generated to document the scope and domain of the exam, the target audience for the exam, the major stakeholders for the exam, and a high-level description of the abilities, knowledge and experience a qualified candidate should possess. Testing objectives are then created from these KSAJs to guide the test development process. Testing objectives are measurable statements of action that specifically state what testing candidates are expected to do relative to the KSAJs and what we are willing to accept as evidence that they can do it.

Blueprint

The resulting test objectives are then weighted by a group of subject matter experts (SMEs) in order to determine exactly how many questions should be on the exam for each objective. The higher-weighted objectives have more items and lower-weighted objectives have fewer items. The purpose of this weighting exercise is to ensure the exam is balance according to relative importance for all objectives. The outcome of this procedure is referred to as the exam blueprint.

Item Development

Each time an exam is updated, a group of SMEs assemble for a one-week item-writing workshop. At the beginning of this workshop, the SMEs review and update all of the testing objectives and the blueprint for the exam. In addition to writing new items to the revised testing objectives, the statistics for all existing items are reviewed to determine how to re-work them in order to enhance performance. Nearly all items are either replaced with new items or modified in some manner to improve performance. Finally, a psychometrician facilitates a group review with the SMEs on all items. In this review, the SMEs edit, revise, and rework each item until they all agree that they 1) are congruent to the stated objective, 2) are technically accurate, meaning that the correct answer is always correct and the distractors are plausible but are definitely incorrect, 3) are written at the right difficulty level (based on the purpose and target ability level), and 4) are relevant and important.

Beta Test

The reviewed items are beta-tested. The beta exam allows FileMaker to evaluate the quality of the item in an actual exam situation, and helps ensure that only the best content and best performing test items are included in the live exam.

Forms Build

Using the items flagged as acceptable from the statistical analysis of the beta test, a psychometrician builds two balanced forms of the exam. The forms are balanced in overall difficulty, discrimination, time, and content (based on the blueprint). Items that are flagged as enemy items are not put on the same form together to avoid duplication or queuing. The pass rate for all possible scores is compared between forms to ensure no advantage is gained or lost based on which form a candidate receives. Any given candidate should have the same probability of passing the exam, regardless of which form they receive.

The Kuder-Richardson reliability index (KR20) is a measure of internal consistency for a test form. Most certification exams with 60 to 70 items generally have KR20s between .85 and .90. However, because of the high quality of items on the FileMaker exam, the KR20 for the most recent forms is .94. That level of reliability is unusual for a 63-item test.

Cut Score

The cut score for an exam is the lowest raw score an examinee can obtain and still pass the exam. The cut score needs to be appropriate for the minimum qualifications a candidate must possess as well as the relative difficulty of the questions. In other words, given the difficulty level of the items on this exam, how many items would we expect a qualified candidate to get right? If the expected ability level of a qualified candidate is very high, but we have fairly easy question, then a high cut score would be appropriate. However, given that the same ability expectation with very hard questions would result in a much lower cut score. The point is we need to set a cut score such that if a candidate is actually qualified, they will pass, if they do not, they will fail.

There are many procedures that can be used to establish an appropriate cut score. The procedure used with the FileMaker exam is the Borderline procedure. This procedure is very common for technology-based exams. Once the final cut score is determined, the scores and pass/fail status for the beta candidates are determined.

Conclusion

The procedures used to develop the FileMaker Developer exam comply with the standards established for fairness in testing. While it is possible that a few individual items may not exhibit long-term desirable performance, the test as a whole has historically performed exceptionally well.

Developer Essentials for FileMaker 13

The following information is provided to help you have an understanding of the key essential areas or objectives that will be covered in the exam for developing and deploying FileMaker 13 business solutions.

Product Technical Specifications

- Describe the product technical specifications for FileMaker Pro 13 and FileMaker Server 13.

Define Database Schema

- Describe and apply auto-entry options.
- Identify the mechanisms and behaviors of validation options and describe the possible outcomes when one is triggered.
- Use a storage option to achieve a desired result.
- Given a particular graph and scenario, define a result.
- Given a scenario, define the appropriate relationship.
- Use ESS to integrate data from external data source, and properly design a schema.

Building Layouts

- Describe the implications of tying a layout to a specific table occurrence.
- Given a scenario identify how a portal can display data from more than one relationship away, and some of the various behaviors that can be assigned to a portal.
- Describe which field/layout object behaviors can be modified.
- Describe the types and attributes of script triggers.
- Given a scenario, identify the implications of choosing a particular trigger type.
- Describe how to use the chart object.
- Identify the implications of selecting or using themes.
- Identify the properties, use, or capabilities of themes, object styles, and states.

Working with Calculations

- Describe the behavior (order of evaluation) and use of new calculation features.
- Describe the behavior (order of evaluation) and use of core calculation functions.
- Describe the behavior and use of custom functions.

Writing Scripts

- Given a scenario, identify the use of core algorithm techniques.
- Identify the use of core scripting features of FileMaker.
- Describe how context (and context changes) can affect/effect script behaviors when retrieving or updating data in related or unrelated tables, and/or navigating between tables or windows.
- Describe the considerations required when writing scripts for a multi-user environment.

Securing FileMaker Systems

- Describe how accounts, privilege sets and authentication interact.
- Describe how to control access and manage security in FileMaker 13 solutions through privilege sets.
- Describe how encryption and external file protection is used to protect FileMaker 13 data.
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Deploy Database Solutions via Server

- Describe the key elements of FileMaker Server installation and deployment, configuration and administration, trouble shooting and monitoring.
- Describe best practices for effective and secure back-ups.
- Describe the key elements of using server-side scripting.

Data Integration

- Describe the formats and methods to import data into FileMaker 13.
- Describe the formats and methods to export data from FileMaker 13.
- Describe the methods for exchanging data with FileMaker 13 databases through Execute SQL, XML Access, ODBC/JDBC API's, and Insert from URL.
- Describe which live back-end data sources are supported, how to connect to them, and how to integrate them into a FileMaker 13 solution.

Publishing FileMaker data on the Web

- Describe the available web publishing options for server (FileMaker WebDirect, CWP, PHP) their configurations, location of components and administrative options.
- Describe how to prepare a FileMaker 13 database solution to be accessed from the Web.

Development Tools and Processes

- Describe development techniques.
- Describe the implications of multiple windows.
- Describe the options and processes involved in the file recovery.
- Describe implications or developer control over user facing features.

FileMaker Go

- Describe the options for deploying a database file to FileMaker Go.
- Identify the unique implications of implementing applications in FileMaker Go.
- Describe the functionality of new features in FileMaker Go.

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