**Title: Quiz Question Page**

**Functionality:** This document covers section 7.2 – Question Page: PageType=2 of specification document

1. **What is developed?**

* When a user clicks on “Begin Quiz” button from Quiz Intro Page, system will redirect it to Question page which will contain a question image along with its answer place for multiple choice question /short answer question.
* Depending on the type of question CkEditor/checkbox will be there to give answer.
* On click of “Next” button user will be validated with no. of answer required for the question.
* If its first question then “Previous” button will not be shown.
* Recommended Timer and Time Remaining are working as a countdown timer for the user to give answer in that time.
* If the Time remaining gets zero, system will validate user that allotted time has expired.
* The functionality to refresh recommended time & Time remaining will be based on the value of ‘TimerUpdateFrequency’ field in Quiz XML.
* The timer will be shown based on the value of ‘ShowTimer’ field in Quiz XML.
* Enforce timer will be done only when ‘EnforceTimer’ is true.
* On click of browser back button, system will validate with a message to use Save and Complete Later functionality.
* System will auto save answer after every minute.

1. **How it is developed?**

* On click of “Begin Quiz” entries are done into QuizCompilation and MappingQuizDetails tables for questions which are there for a Quiz.
* Entries in QuizResultSummary will be done with EndDate as null and entering StartDate.
* On load, the Time Remaining interval gets decremented by second/minute/ on load page – as per the settings done in Quiz XML file. Similarly for Recommended time.
* Time remaining and recommended time are decremented based on the value of ‘TimerUpdateFrequency’.
  + TimerUpdateFrequency – 0 : Refresh timer on second
  + TimerUpdateFrequency – 1 : Refresh timer on minute
  + TimerUpdateFrequency – 0 : Refresh timer on page changed
* If the Quiz XML has ‘NumberOfMarks’ field as 1 then only 1 answer is required and is validated for a question.
* The question will be shown in the order as per set in Quiz XML – QuizPageQuestion tags of XML.
* If QuizPageQuestion tag contains more no. of question id then multiple questions will be shown on a Question page. (This is for multiple short answer questions)
* Based on the question id – values from QuizQuestion tag with Question id equal to the Question id defined in QuizPageQuestion details will be fetched to show on Question page.
* On change of question time remaining will be stored in cache memory and on load of next question it will be retrieved from cache memory. This is done using SetAndGetRemainingtime() method.
* There are two types of questions. It can be identifying based on ‘QuestionType’ property from XML file.
* If QuetionType is 1 then it is a multiple choice question and if QuestionType is 2 then it is a short answer question.
* NoOfAnswersRequired property state the number of answers in multiple choice question.
* CorrectAnswer property state the correct answer for muiltiple choice question.
* QuestionImageName and SolutionImageName fields contains image name which are stored at specific path i.e. forms\Data\AppWriteWebRead\Quiz\Images. System will return whole image path to bind it on ui.
* NumberOfMarks state the marks of the question
* TimeToAnswer is the recommended time for the question. By calculating ‘TimeToAnswer’ property for each question exists in xml it will be Total allotted time to complete quiz.
* WriteSolutionInSpecificLocationMessage field is used to write some special instructions. If it contains value then system will bind it.

1. **Where to find code?**

* **Templates**: TSFXGenformWeb > templates > Quiz > questionPage.html.
* **Clientside** :
  + Controller : TSFXGenformWeb > app > controllers > quiz > questionPageController.ts
  + Service : TSFXGenformWeb > app > services > quiz > questionPageService.ts
* **Controllers** : TSFXGenform.Core > Controllers > QuizController :
* Methods:
  + - GetFirstQuestionNumberToLoadOnQuestionPage (): Method to get the first question number for quiz.
    - InitializeQuizResultSummaryAndQuizCompilation (): Insert details into QuizResultSummary and QuizCompilation.
    - GetQuestionAndPageDetailsForQuestionPage () : Get details of questions.
    - GetNextQuizPageOfQuiz () : Get next page of quiz.
    - SaveAnswersOfQuestions () : Save user answer and time taken.
    - GetPreviousQuizPageOfQuiz() : get previous quiz page.
    - GetTotalNumberOfQuestions():Get total number of quiz question.
    - GetTotalAllottedTimeForQuiz(): Get total allotted time for quiz.
    - SetAndGetRemainingtime():It will store time remaining time on change of question.
    - SetValueOfFirstQuestionToHidePreviousButton(): It will set first question number to hide previous button.
* **Repository** : TSFXGenform.Repository > Repository >Cache Repository.cs, XmlDataRepository.cs ,QuizRepository
* **Repository** : TSFXGenform.Repository > IRepository >ICache Repository.cs, IXmlDataRepository.cs ,IQuizRepository