1. step 1: start from MEDIUM level - show 75% of questions from question bank
   1. step 1.1: if score >= 65%, show 75% of questions from HARD level
      1. step 1.1.1: if score >= 65%, generate report - "good at this sub-topic"
      2. step 1.1.2: if score < 65%, show balance 25% of questions from MEDIUM level and 75% of questions from EASY level. Mix these two set of questions, randomly display questions.
         1. step 1.1.2.1:If score is >= 65%, ‘generate a report saying good at easy and medium level questions in this topic. Need focus on hard level questions”
         2. step 1.1.2.2:If score is < 65%, ‘generate a

report saying “Need to focus the entire sub-topic”

* 1. step 1.2: if score < 65%, show 75% of questions from EASY level
     1. step 1.2.1: if score >= 65%, generate a report “Good at EASY level. Need focus on MEDIUM level”
     2. step 1.2.2: if score < 65%, generate a report “Not good at foundation”.

Yes, let's break down the implementation steps sequentially:

Step 1 (Current Implementation):

* Start with MEDIUM level (75% of questions)
* Track score
* If ≥65% -> HARD
* If <65% -> EASY

Step 2 (HARD path):

* If user moves to HARD level (75% of questions)
* Track score
* If ≥65% -> Generate report "good at this sub-topic"
* If <65% -> Mix 25% MEDIUM + 75% EASY questions randomly

Step 3 (Mixed MEDIUM+EASY path):

* After showing mixed questions
* Track score
* If ≥65% -> Report "good at easy and medium level questions, need focus on hard level"
* If <65% -> Report "Need to focus the entire sub-topic"

Step 4 (EASY path):

* If user moved to EASY level (75% of questions)
* Track score
* If ≥65% -> Report "Good at EASY level. Need focus on MEDIUM level"
* If <65% -> Report "Not good at foundation"

Step 5:

* Save all reports and scores in database for future reference
* Cleanup and optimization

TEST CASES  
Here are the test cases you can try to verify the complete adaptive logic:

1. Starting with MEDIUM (4 questions): Test Case 1 - High Performance Path:

* Score ≥65% (3 or 4 correct out of 4)
* Should move to HARD level
* Continue testing for both scenarios in HARD

Test Case 2 - Low Performance Path:

* Score <65% (0-2 correct out of 4)
* Should move to EASY level
* Continue testing for both scenarios in EASY

1. After MEDIUM → HARD Path: Test Case 3 - Success in HARD:

* Get ≥65% in HARD questions
* Should see report: "Excellent mastery of this sub-topic!"

Test Case 4 - Struggle in HARD:

* Get <65% in HARD questions
* Should move to mixed MEDIUM/EASY questions
* Then test both scenarios: a. ≥65% in mixed → "Good at easy/medium, needs hard focus" b. <65% in mixed → "Need to focus on the entire sub-topic"

1. After MEDIUM → EASY Path: Test Case 5 - Success in EASY:

* Get ≥65% in EASY questions
* Should see report: "Good at EASY level. Need focus on MEDIUM level"

Test Case 6 - Struggle in EASY:

* Get <65% in EASY questions
* Should see report: "Not good at foundation"

1. Edge Cases: Test Case 7 - Perfect Score:

* Get 100% in all attempts
* Verify progression and final report

Test Case 8 - Minimal Pass:

* Get exactly 65% in each level
* Verify progression and reports

Test Case 9 - Zero Score:

* Get all answers wrong
* Verify progression and final report

