

ARITHMETIC Q

Analyze and implement the textual base program, given the specification and the program sample, in python.

1.1 SPECIFICATION

Arithmetic Q is a program that asks the user the level of difficulty of the quiz. Based on the level of the difficulty, it asks for a value of a randomly generated arithmetic expression involving two terms and one arithmetic operator any from addition, subtraction, multiplication and division operators. (The operator is randomly chosen and each of the two terms is randomly chosen. Each term in the expression is an integer any between 1 – 100, 1 – 200, 1-300, 1 – 400 for easy, hard, harder, and hardest level, respectively.)

On getting the value as an answer from the user, it says if the answer is correct or wrong, scores the user on the rule of 'each correct answer adds one mark', displays the total score and asks the next question if the user wishes to continue or finish.

At the end of the session, the program generates feedback consisting of the user's answer against each question asked and the correct answer where the user's is wrong. It also prints a summary consisting of total questions asked, total correct answers, total wrong answers, total scores and relative score (total scores / total questions * 100). At this stage, it prompts the user if to retake a new quiz or exit and does the needful on the user's response.

1.2 PROGRAM SAMPLE

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Difficulty level
1. Easy      (1 - 100)
2. Hard      (1 - 200)
3. Harder    (1 - 300)
4. Hardest   (1 - 400)

1
*****

(1) 3 + 76 = 79

Correct!

Your total score is 1

1. Continue
0. Finish

1
```

(2) $4 \times 9 = 11$

Wrong!

Your total score is 1

1. Continue

0. Finish

1

(3) $30 + 70 = 100$

Correct!

Your total score is 2

1. Continue

0. Finish

0

Feedback

(1) $3 + 76 = 79$ correct

(2) $4 \times 9 = 11$ wrong, correction: 36

(3) $30 + 70 = 100$ correct

Summary

Total questions 3

Total scores 2

Correct answer 2

Wrong answer 1

Relative score 66.67%

1. Retake new quiz

0. exit