#include <iostream>

#include <iomanip> // std::setw()

#include <cstdlib> // For srand(seed) and rand()

int main()

{

double num1, num2, result, choice, user\_input;

do{

std::cout << " Math Tutor Menu\n"

<< "-------------------------------\n"

<< "1. Addition problem\n"

<< "2. Subtraction problem\n"

<< "3. Multiplication problem\n"

<< "4. Division problem\n"

<< "5. Quit this program\n"

<< "-------------------------------\n";

do{

std::cout << "Enter your choice (1-5): ";

std::cin >> choice;

if(choice < 1 || choice > 5)

std::cout << "Please enter a number inside the range of 1 through 4.";

} while(choice < 1 || choice > 5);

srand((unsigned) time(0));

num1 = rand() & 1000;

num2 = rand() & 1000;

// case 1: Addition

if(choice == 1){

result = num1 + num2;

std::cout << std::setw(5) << num1

<< "\n+" << std::setw(4) <<num2

<< "\n-----\n";

std::cin >> user\_input;

if(user\_input != result)

std::cout << "Sorry, the correct answer is " << result << "\n\n";

else

std::cout << "\nCongratulations!\n\n";

}

// case 2: Subtraction

else if(choice == 2){

result = num1 - num2;

std::cout << std::setw(5) << num1

<< "\n-" << std::setw(4) <<num2

<< "\n-----\n";

std::cin >> user\_input;

if(user\_input != result)

std::cout << "Sorry, the correct answer is " << result << "\n\n";

else

std::cout << "\nCongratulations!\n\n";

}

// case 3: Multiplication

else if(choice == 3){

result = num1 \* num2;

std::cout << std::setw(5) << num1

<< "\n\*" << std::setw(4) <<num2

<< "\n-----\n";

std::cin >> user\_input;

if(user\_input != result)

std::cout << "Sorry, the correct answer is " << result << "\n\n";

else

std::cout << "\nCongratulations!\n\n";

}

// case 4: Division

else if(choice == 4){

result = num1 / num2;

std::cout << std::setw(5) << num1

<< "\n/" << std::setw(4) <<num2

<< "\n-----\n";

std::cin >> user\_input;

if(user\_input != result)

std::cout << "Sorry, the correct answer is " << result << "\n\n";

else

std::cout << "\nCongratulations!\n\n";

}

// case 5: Quit

else{

return 0;

}

} while(choice != 5);

return 0;

}

/\* Test result

+ 32

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136

Congratulations!

Math Tutor Menu

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1. Addition problem

2. Subtraction problem

3. Multiplication problem

4. Division problem

5. Quit this program

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Enter your choice (1-5): 2

424

- 616

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-192

Congratulations!

Math Tutor Menu

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1. Addition problem

2. Subtraction problem

3. Multiplication problem

4. Division problem

5. Quit this program

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Enter your choice (1-5): 3

416

\* 424

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1234

Sorry, the correct answer is 176384

Math Tutor Menu

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1. Addition problem

2. Subtraction problem

3. Multiplication problem

4. Division problem

5. Quit this program

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Enter your choice (1-5): 4

264

/ 352

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1234

Sorry, the correct answer is 0.75

Math Tutor Menu

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1. Addition problem

2. Subtraction problem

3. Multiplication problem

4. Division problem

5. Quit this program

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Enter your choice (1-5): 5

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