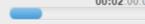Practice
Implement Recursion

Exercise

- Practice 1: Road Trip

- Practice 2: Add Even

PRACTICE

Practice 1: Road Trip

Tom and Richie are travelling from London to York by road. Tom wishes to calculate the distance they have covered in miles, while Richie wishes to calculate it in kilometers. Both have decided to do the km to mile and mile to km conversion by using the Fibonacci Series.

Write a Java program to generate the Fibonacci Series by using recursion

Practice 1: Tasks

- The class `FibonacciSeries` consists of two methods.

  - `public long fibonacci(long number)`

    - This is a recursive method that takes an integer as input and returns the number of Fibonacci series numbers based on the input.

    - If 9 is the input, it must generate the first 9 numbers of the series i.e., 0,1,1, 2, 3, 5, 8, 13, 21.

  - `public void printFibonacciSeries(long number)`

    - This method prints the Fibonacci series by calling the `fibonacci()` method to get the next number in the series.

- In the main method, call the `printFibonacciSeries` method and print the series.

PRACTICE

Practice 2: Add Even

Write a program with a recursive method called `addEvens` that returns the sum of the given first "n" even integers.
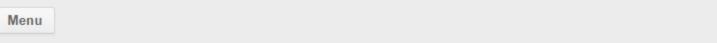
For example,

`addEvens(1)` must return 0

`addEvens(9)` must return 20

`addEvens(-9)` must return 0

Practice 2 : Tasks

- The class `AddEven` consists of one recursive method to calculate the sum of even numbers.

  - `public long addEvens(int n)`

    - This method takes a positive integer 'n' as input and finds the sum of all the even numbers up to the given number 'n'.

    - For example, if input is 9, then the even numbers till 9 are summed up 2+4+6+8 = 20.

- In the main method call the `addEvens` method and print the sum of even numbers.