Question 10

import java.util.Scanner;

class PlayfairCipherKeys {

public static void main(String[] args) {

int numKeys = 0;

Scanner read = new Scanner(System.in);

String alphabet = read.nextLine();

for (int i = 0; i < alphabet.length(); i++) {

for (int j = 0; j < alphabet.length(); j++) {

if (i == j) {

continue;

}

numKeys++;

}

}

System.out.println("The Playfair cipher has approximately " + Math.pow(2, numKeys) + " possible keys.");

}

}

Output:

saveetha

The Playfair cipher has approximately 7.2057594037927936E16 possible keys.