**CSAP - Secret Code**

A secret code is a translation of a String expression converted into a 2 character code. It is the sum of the ASCII code of each character in a String expression. Based on certain values of the sum, it will convert the sum into 2 characters. Convert the sum by executing the following steps in order:

1. Parse through the String expression. Get the ascii code of each character’s ascii and add them up
2. If the sum is an odd *number of digits*, multiply the sum by 10, otherwise leave it alone
3. After step 2, if the number is less than or equal to 4000, then multiply the number by 4
4. After step 3, if the number is an odd number of digits, divide by 10, otherwise leave it alone
5. Separate the number into pairs of digits. If either pair is less than or equal to 65, add 61 to it.
6. Translate each ascii pair back into a character. The result is the secret code.

Additional restriction: The original String must be at least 2 characters and no more than 12 in length

**Include the following methods in your program:**

//Returns true if the length of the String s, len is 2 <= len <= 12. Otherwise return false.

private static boolean isValidLength (String s)

//returns the ASCII code of character s

private static int charToAscii (String s)

// Returns the number of digits in n. No String methods, no Math methods.

// Use a loop. count how many times you can divide by 10 before the quotient is 0.

private static int getNumDigits (int n)

//Translates a 4 digit number, num and returns a 2 character secret code.

// Num is separated into two, 2-digit numbers. Both 2-digit numbers must be >= 65.

// If either one is not, add 61 to it. The 2-digit numbers are ascii code for the secret code.

// Convert each 2-digit number back into character and return it

private static String getSecretCode (int num)

**HINTS**

To convert from a String to an ASCII code, use the char String charAt(int p) method, which takes the letter/character at position p and returns a char. Then typecast the char into an int. The resulting int is the ascii code.

To convert an ASCII into a String, typecast the ASCII to char and use the toString method of Character. For example: Character.toString ( (char) asciiCode) is an expression that will return the Character translation of asciiCode.

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| **Example 1**  String input = “aa”;  Sum of ascii codes = **194**  Odd number of digits → 1940  Less than 4000 → **7760**  Even number of digits  Two pairs → 77, 121  Secret code → **My** | **Example 2**  String input = “ABCDE”  Sum of ascii codes = **335**  Odd number of digits → 3350  Less than 4000 → 13400  Odd number of digits → **1340**  Two pairs → 13, 40  Both pairs < 65  Two pairs → 74, 101  Secret code → **Je** | **Example 3**  String input = “1234567890\*&^” (too long)  String input = “123456789\*#”  Sum of ascii codes = **554**  Odd number of digits → **5540**  More than 4000  Even number of digits  Two pairs → 55, 40  Both pairs < 65  Two pairs → 116, 101  Secret code-->**te** |

Your output should include 3 items: the sum of the ascii codes, the 4 digit number before it is split into two 2 digit numbers and the secret code.