**6. Write a Java code for ciphertext has been generated with an affine cipher. The most frequent letter of the ciphertext is “B,” and the second most frequent letter of the ciphertext is “U.”Break this code.**

**CODE:**

**import java.util.HashMap;**

**import java.util.Map;**

**import java.util.Scanner;**

**public class AffineCipherBreaker {**

**private static final String ALPHABET = "ABCDEFGHIJKLMNOPQRSTUVWXYZ";**

**public static void main(String[] args) {**

**Scanner read = new Scanner(System.in);**

**String ciphertext = read.nextLine();**

**Map<Character, Integer> frequencyMap = new HashMap<>();**

**for (char c : ciphertext.toCharArray()) {**

**frequencyMap.put(c, frequencyMap.getOrDefault(c, 0) + 1);**

**}**

**char mostFrequent = 'A';**

**char secondMostFrequent = 'A';**

**int highestFrequency = 0;**

**int secondHighestFrequency = 0;**

**for (char c : frequencyMap.keySet()) {**

**int frequency = frequencyMap.get(c);**

**if (frequency > highestFrequency) {**

**secondMostFrequent = mostFrequent;**

**secondHighestFrequency = highestFrequency;**

**mostFrequent = c;**

**highestFrequency = frequency;**

**} else if (frequency > secondHighestFrequency) {**

**secondMostFrequent = c;**

**secondHighestFrequency = frequency;**

**}**

**}**

**System.out.println("Most frequent letter: " + mostFrequent);**

**System.out.println("Second most frequent letter: " + secondMostFrequent);**

**}**

**}**

**OUTPUT:**

