Question 11

class HillCipher {

public static void main(String[] args) {

int[][] key = { { 9, 4 }, { 5, 7 } };

String plaintext = "meet me at the usual place at ten rather than eight oclock";

plaintext = plaintext.replaceAll("[^a-zA-Z]", "").toUpperCase();

int n = plaintext.length();

if (n % 2 != 0) {

plaintext += "X";

n++;

}

int[] ciphertext = new int[n];

for (int i = 0; i < n; i += 2) {

int c1 = plaintext.charAt(i) - 'A';

int c2 = plaintext.charAt(i + 1) - 'A';

ciphertext[i] = (key[0][0] \* c1 + key[0][1] \* c2) % 26;

ciphertext[i + 1] = (key[1][0] \* c1 + key[1][1] \* c2) % 26;

}

StringBuilder result = new StringBuilder();

for (int i = 0; i < n; i++) {

result.append((char) (ciphertext[i] + 'A'));

}

System.out.println(result);

}

}

Output :

UKIXUKYDROMEIWSZXWIOKUNUKHXHROAJROANQYEBTLKJEGAD