**Question:** You have joined as an intern under a renowned cyber specialist and have to assist her in locating a murderer. After staring at the cryptic messages sent by the murderer for hours, you have finally figured out the pattern: your main clue is on the primary diagonal, that is, you will start comparing the alphabets from the top left and bottom right till you reach the end point of the diagonal and the mismatched alphabets are your potential apartment names.

The murderer thinks that the law enforcement is incapable which is why this person sent a hint with the latest message. The hint states that upon decoding this message, you will be able to pinpoint the possible apartment numbers the murderer may be hiding in. The clock is ticking and you have 20 minutes to bring justice to the victims.

Exam Instructions: The 2D array will be a squared one.

The order of the apartment names do not matter since you have to search each one anyway.

| **Sample Input** | **Sample Output** |
| --- | --- |
| | **A** | D | M | Q | | --- | --- | --- | --- | | E | **S** | Y | K | | J | F | **O** | L | | P | X | J | **A** | | Possible Apartment Names: **S O** |
| | **A** | D | M | Q | F | | --- | --- | --- | --- | --- | | E | **S** | Y | K | W | | J | F | **O** | L | T | | P | X | J | **S** | Y | | V | R | K | G | **P** | | Possible Apartment Names: **A P O** |

//python //java

def decodeMessage(codeword): public static void decodeMessage(String[][] codeword){

#To Do //To Do

pass }

**Question:** You have joined as an intern under a renowned cyber specialist and have to assist her in locating a murderer. After staring at the cryptic messages sent by the murderer for hours, you have finally figured out the pattern: your main clue is on the secondary diagonal, that is, you will start comparing the alphabets from the top right and bottom left till you reach the end point of the diagonal and the mismatched alphabets are your potential apartment names.

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| **Sample Input** | **Sample Output** |
| --- | --- |
| | A | D | M | **Q** | | --- | --- | --- | --- | | E | S | **Y** | K | | J | **Y** | O | L | | **P** | X | J | A | | Possible Apartment Names: **Q P** |
| | A | D | M | Q | **F** | | --- | --- | --- | --- | --- | | E | S | Y | **K** | W | | J | F | **O** | L | T | | P | **X** | J | S | Y | | **F** | R | K | G | P | | Possible Apartment Names: **K O X** |

//python //java

def decodeMessage(codeword): public static void decodeMessage(String[][] codeword){

#To Do //To Do

pass }