

Mohammad Ali Jinnah University

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**Quiz 2**

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**Section:** AM

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package com.company;  
  
import java.io.BufferedReader;  
import java.io.IOException;  
import java.io.InputStreamReader;  
import java.util.Arrays;  
import java.util.Scanner;  
  
public class Quiz2 {  
 static int *r* = 10;  
 static int *c* = 10;  
 static int[] *x* = { -1, -1, -1,-1, 0, 0, 1, 1, 1 ,1};  
 static int[] *y* = {0, -1, 0, 1, -1, 1, -1, 0, 1 ,0};  
  
 public static void main(String[] args) throws IOException {  
 char[][] arr2D = new char[][]{{'E','T' ,'Q', 'I' ,'C', 'A' ,'T' ,'R' ,'O' ,'D'},{'L', 'W', 'T', 'P', 'R', 'O', 'P', 'E' ,'R' ,'A'},{'E' ,'I' ,'A' ,'R' ,'B' ,'C' ,'L' ,'A', 'S' ,'S'},{'F', 'T','O', 'Z', 'W' ,'V', 'A', 'N', 'Q' ,'S'},{'A' ,'E' ,'Q', 'N', 'S', 'P', 'D', 'F', 'S', 'A'},{'E' ,'A' ,'D', 'G', 'R' ,'E' ,'Y' ,'I' ,'S','I'},{'A' ,'S' ,'A' ,'S' ,'D' ,'O' ,'S' ,'D' ,'A' ,'M'},{'R' ,'A' ,'G' ,'J' ,'P' ,'H' ,'Q', 'W', 'E', 'E'},{'G' ,'H' ,'J', 'T', 'Q', 'E', 'E' ,'E' ,'Q' ,'W'},{'H' ,'Z', 'X' ,'D' ,'R' ,'E' ,'E' ,'F' ,'Y', 'W'}};  
 String search = "PROPER";  
 *Search2D*(arr2D,search);  
 }  
  
 static void Search2D(char arr2D[][],String search){  
 for (int i = 0; i < *r*; i++)  
 for (int j = 0; j < *c*; j++)  
 if ((arr2D[i][j] == search.charAt(0))){  
 if(*search2D*(arr2D, search, i, j)){  
 System.*out*.print(i +""+j);  
 break;  
 }  
 }  
  
  
 }  
  
 static boolean search2D(char[][] grid, String word,int row, int col) {  
 int len = word.length();  
  
 for (int firstLoop = 0; firstLoop < 8; firstLoop++) {  
 int k, rd = row + *x*[firstLoop], cd = col + *y*[firstLoop];  
  
 for (k = 1; k < len; k++) {  
 if (rd >= *r* || rd < 0 || cd >= *c* || cd < 0)  
 break;  
  
 // If not matched, break  
 if (grid[rd][cd] != word.charAt(k))  
 break;  
  
 rd += *x*[firstLoop];  
 cd += *y*[firstLoop];  
 }  
  
 if (k == len)  
 return true;  
 }  
 return false;  
 }  
  
}