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# Rendu de Projet : Tron

**Pseudo sur CodinGame** : LucasV-TheKeeper918

**Adresse du dépôt GitHub** : https://github.com/LucasVaurie/tron

**Code** :

```
class Tron {
    public static void main(String args[]) {
        Scanner in = new Scanner(System.in);
        char [][] grille = new char[20][30];
        grille = initGrille(grille);
        String direction = "null";
        // game loop
        while (true) {
            int N = in.nextInt();
            int P = in.nextInt();
            int currentX = 0, currentY = 0;
            for (int i = 0; i < N; i++) {
                int X0 = in.nextInt();
                int Y0 = in.nextInt();
                int X1 = in.nextInt();
                int Y1 = in.nextInt();
                grille[Y0][X0] = Character.forDigit(i, 16);
                grille[Y1][X1] = Character.forDigit(i, 16);
                if (i == P) {
                    currentX = X1;
                    currentY = Y1;
                }
            }
            direction = actionChoisie(grille, currentX, currentY, direction);
            System.out.println(direction);
        }
    }

    public static char[][] initGrille(char[][] grilleVide) {
        for (int i = 0 ; i < 20 ; i ++) {
            for (int j = 0 ; j < 30 ; j ++) {
                grilleVide[i][j] = 'o';
            }
        }
        return grilleVide;
    }

    public static String actionChoisie(char[][] grilleJeu, int currentX,
                                       int currentY, String direction) {
        boolean enCours = true;
        String decision = "null";
        if (direction != "null") {
            decision = maintienDirection(grilleJeu, currentX, currentY, enCours,
direction);
            if (decision != "null")
                return decision;
        }
```

```
        if (currentX-1 != -1 && enCours) {
            decision = dirGauche(grilleJeu, currentX, currentY, enCours);
            if (decision != "null")
                return decision;
        }
        if (currentY-1 != -1 && enCours) {
            decision = dirHaut(grilleJeu, currentX, currentY, enCours);
            if (decision != "null")
                return decision;
        }
        if (currentY+1 <= 19 && enCours){
            decision = dirBas(grilleJeu, currentX, currentY, enCours);
            if (decision != "null")
                return decision;
        }
        if (currentX+1 <= 29 && enCours) {
            decision = dirDroite(grilleJeu, currentX, currentY, enCours);
            if (decision != "null")
                return decision;
        }
        return "null";
    }

    public static String maintienDirection(char[][] currentGrille, int currentX,
int currentY, boolean running, String dir) {
        if (dir == "LEFT") {
            if (currentX-1 != -1 && running)
                return dirGauche(currentGrille, currentX, currentY, running);
        } else if (dir == "UP") {
            if (currentY-1 != -1 && running)
                return dirHaut(currentGrille, currentX, currentY, running);
        } else if (dir == "DOWN") {
            if (currentY+1 <= 19 && running)
                return dirBas(currentGrille, currentX, currentY, running);
        } else if (dir == "RIGHT") {
            if (currentX+1 <= 29 && running)
                return dirDroite(currentGrille, currentX, currentY, running);
        }
        return "null";
    }

    public static String dirGauche(char[][] currentGrille, int currentX, int
currentY, boolean running) {
        if (currentGrille[currentY][currentX-1] == 'o') {
            running = false;
            return "LEFT";
        }
        return "null";
    }
    public static String dirDroite(char[][] currentGrille, int currentX, int
currentY, boolean running) {
        if (currentGrille[currentY][currentX+1] == 'o') {
            running = false;
            return "RIGHT";
        }
        return "null";
    }
```

```
    public static String dirHaut(char[][] currentGrille, int currentX, int
currentY, boolean running) {
        if (currentGrille[currentY-1][currentX] == 'o') {
            running = false;
            return "UP";
        }
        return "null";
    }

    public static String dirBas(char[][] currentGrille, int currentX, int
currentY, boolean running) {
        if (currentGrille[currentY+1][currentX] == 'o') {
            running = false;
            return "DOWN";
        }
        return "null";
    }
}
```