

406410114 UVA118 Mutant Flatworld Explorers

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#include <bits/stdc++.h>
using namespace std;

int main(){
    int i,j,k,x_lim,y_lim;
    cin >>x_lim>>y_lim;
    int x,y;
    char ori_face;
    string cmd;
    char L[] = { 'N','W','S','E' };
    char R[] = { 'N','E','S','W' };

    bool scent[102][102];
    for ( i = 0;i<102;i++ )
        fill( scent[i],scent[i]+102,false );

    while ( cin >>x>>y>>ori_face>>cmd ){
        bool LOST = false;
        for ( i = 0;i<cmd.length();i++ ){
            if ( cmd[i] == 'R' ){
                for( j = 0; R[j] != ori_face ;j++ );
                ori_face = R[(j+1)%4];

            }//if
            else if ( cmd[i] == 'L' ){
                for( j = 0; L[j] != ori_face ;j++ );
                ori_face = L[(j+1)%4];
            }//else if

            else if ( cmd[i] == 'F' ){
                if ( ori_face == 'E' ){
                    if ( LOST == false ){
                        x++;
                        if ( x>x_lim ){
                            x--;
                            if ( scent[x][y] == false ){
                                scent[x][y] = true;
                                LOST = true;
                                break;
                            }
                        }
                    }
                }

                }//if
            }//if

            }//if
            else if ( ori_face == 'W' ){
                if ( LOST == false ){
                    x--;
                    if ( x<0 ){
                        x++;
                        if ( scent[x][y] == false ){
                            scent[x][y] = true;
                            LOST = true;
                            break;
                        }
                    }
                }
            }

            }//if
            else if ( ori_face == 'S' ){
                if ( LOST == false ){
                    y--;
                    if ( y<0 ){
                        y++;
                        if ( scent[x][y] == false ){
                            scent[x][y] = true;
                            LOST = true;
                            break;
                        }
                    }
                }
            }

            }//if
            else if ( ori_face == 'N' ){
                if ( LOST == false ){
                    y++;
                    if ( y>y_lim ){
                        y--;
                        if ( scent[x][y] == false ){
                            scent[x][y] = true;
                            LOST = true;
                            break;
                        }
                    }
                }
            }

            }//if
            }//if
        }

        cout << " ori_face:" <<ori_face<<endl;
    }
}

```

```
//      cout << " x:" <<x<<endl;
//      cout << " y:" <<y<<endl;

} //for
if ( LOST == true )
    cout << x << " "<<y << " "<< ori_face<< " LOST\n";
else
    cout << x << " "<<y << " "<< ori_face<< "\n";

} //while

return 0;
} //main()
```