

00:16:58:04
N 52 CODE 7221
DATA CH12 1.31

STABILITY: 99.8%

28 MPH

STABILITY: 99.4%

AXIS: 1244

POWER: 85%

HUD
TERRAIN
L31 / L63
N81 / W86



L31 / L63 N81 / W86

L31 / L63
N81 / W86

Tower Wars

IS ACTIVATED

International Coding Contest
22nd March 2019

CODE: 05-08115-14
20 540

December 2984

location: fringe of the galactic empire

Planet Ulm, Habsburg cluster



One of the last remaining bastions of humanity is in peril. Outer-space defenses failed.

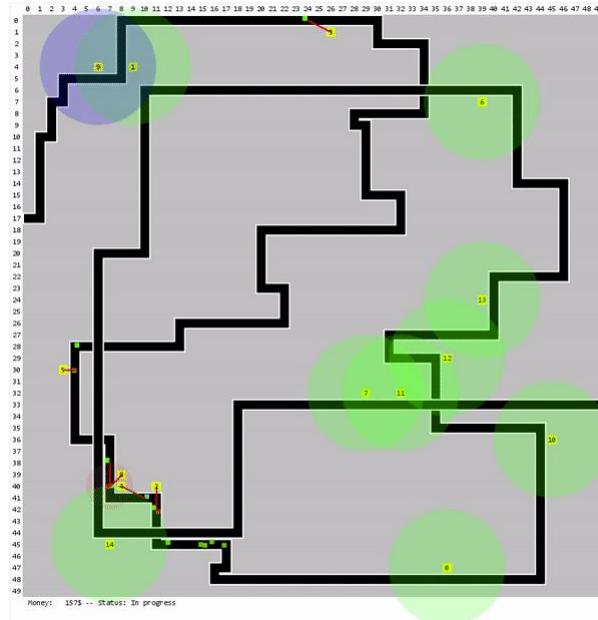
Relentless waves of aliens are expected to slip through the atmosphere and land on the labyrinth-like planet surface.

We have to build up our ground defenses. There is no other choice.

You, commander, are our only hope.

> Your task

- › Use all acquired knowledge to find the best way to plan all ground defenses
- › Resources are scarce so planning ahead is crucial
- › Use the maze-like surface of the planet to find the best places to set up your defense towers and smash the invading forces before they reach the base
- › Your AI assistant, Glados, will guide you all the way through





Level 1



Level 1

Glados:

So you're the "great" commander everyone's been talking about, eh? We'll see about that...

You have to decipher the invading aliens' movement language

Task for Level 1:

Find out the final position of their troops by interpreting their coded language



Level 1

- › The world is a 2D cell grid
- › Information has been stolen by our spies as to what alien symbols mean
- › Initially, all invaders are facing towards the right side
- › You will be given a starting position **X Y**
- › And a sequence of movements which can be:
 - › FORWARD: (F n) -> meaning move n cells forward
 - › TURN: (T n) -> turn 90° clockwise n times
- › Your task will be to find out where that sequence of movements ends up

**Input format.**

<X> <Y>

<COMMAND> <STEPS> <COMMAND> <STEPS> ...

COMMAND = { F - forward, T - turn }

STEPS = integer, number of times to execute command

Output format.

<Finish_X> <Finish_Y>

The output should represent the coordinates of the aliens after they have finished the moves

> Level 1

Example:

A command is always followed by the number of times it should be executed. *F* 5 means 'move forward 5 steps', *T* 2 means turn 90° clockwise 2 times(180° turn).

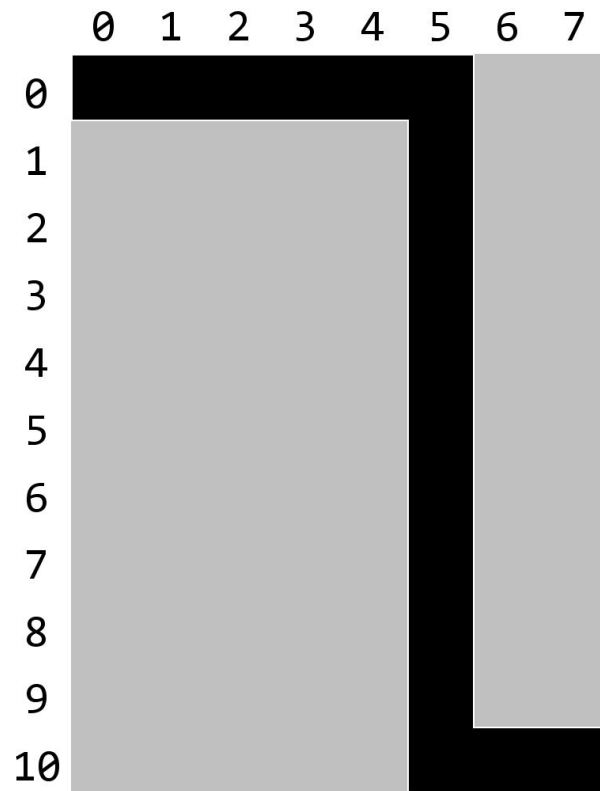
Input:

0 0

F 5 T 1 F 10 T 3 F 2

Output:

7 10



previous example