



ELECTRICAL TEAM TRAINING

TASK 2

TABLE OF CONTENTS

ABSTRACT	3
DATA	4
INPUT	6
OUTPUT	6
BONUS	6
Example	7
SUBMISSION	8

ABSTRACT



loading...

HEALTH

loading...

loading...

ENERGY

loading...

During the Big Battle that occurred in Hogwarts, **Voldemort** asked **Harry Potter** for a one to one wizard fight. Harry set off on what he knew would be a suicide mission, to allow Voldemort to strike him with an Avada Kedavra spell in the forest just to kill the one of the two remaining horcruxes.

Upon going gentle into that good night, Harry awakened in what appeared to be a milky white vision of King's Cross Station, where he'd hopped onto Platform 9¾ so many times before. Dumbledore awaited him with news that he'd successfully killed off the part of Voldemort that remained inside of him in the process of dying, and that he had a choice to board a train back to the realm of the living or to just move on ... to where, he didn't say.

Harry, knowing his battle wasn't done, opted for the former.

Voldemart and Harry Potter cast the spells at the same time. Both of them have properties (helath, energy and shield) to cast the spell or even to defend the enemy's spell. They have commun spells and each one of those wizards has special spells too.



Data

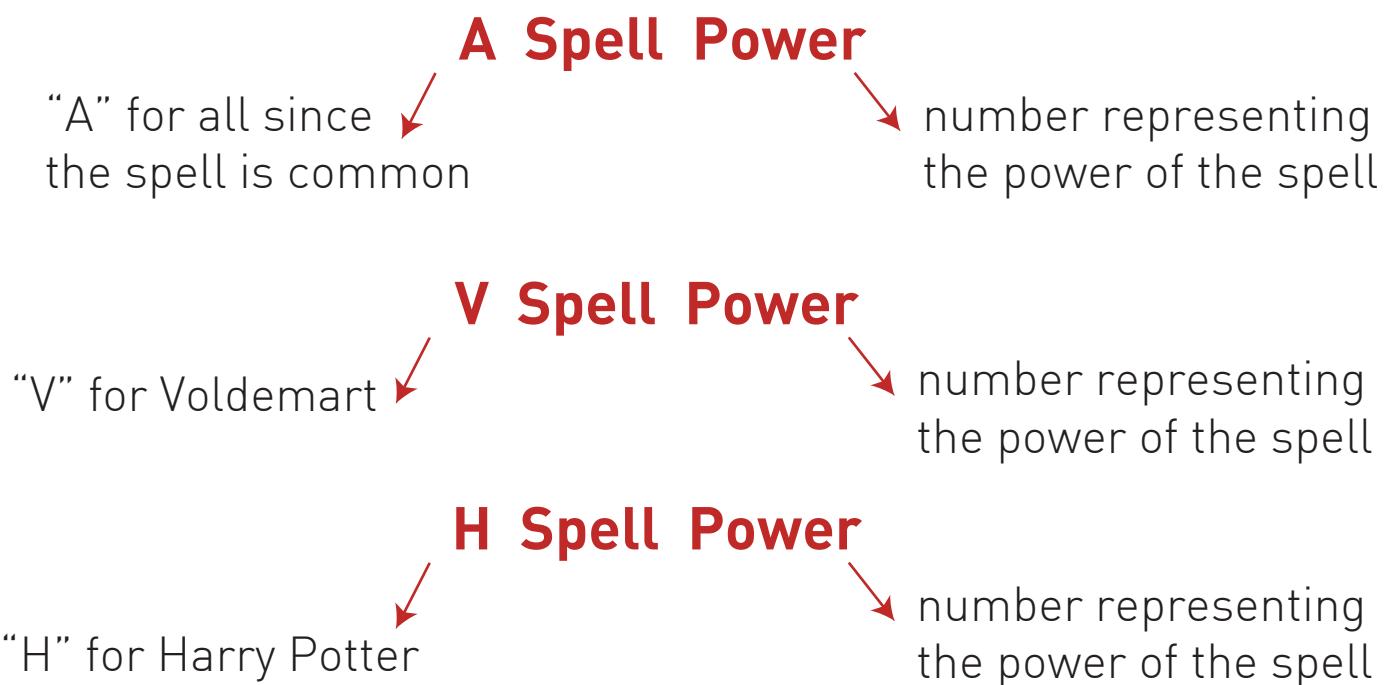
Wizard's Properties

- HEALTH** → It represents the wizard's health and it's affected by the enemy's spell according to the difference between the power casted by both of them.
Default: 100 for both wizards.
- ENERGY** → It represents the wizard's energy and it's affected by the power of the spell casted by the wizard himself.
Default: 500 for both wizards.
- SHIELD** → The shield protects the wizard. It skips the spell casted by the enemy. However, the wizard should not use it more than 3 times.
Limit: 3

You have a text file including the common spells, Voldemart's spells and Harry's spells as follows:

Common Spells	Power
Voldemort Spells	Power
Harry Potter Spells	Power

The Spells are written as follows:



This means that each line composes of char to differentiate the common spells and each one's special spells, space, the spell, space and finally a number initializing the power of the spell.

INPUT

The input consists of the two spells at the same time (one input in the line) in order as follows:

Harry Potter's spell (space) Voldemort's spell

OUTPUT

Your program should print:

- The HEALTH for each wizard
- The ENERGY for each wizard
- The Winner of the Battle

BONUS

Write the output to (xml) file.

EXAMPLE

Enter the two spells (harry then voldemort):

Crucio Crucio

Harry	Voldemort
Health : 100	100
Energy : 460	460

Enter the two spells (harry then voldemort):

Reducto Taboo

Harry	Voldemort
Health : 80	100
Energy : 400	380

Enter the two spells (harry then voldemort):

sheild AvadaKedavra

Harry	Voldemort
Health : 80	100
Energy : 400	280

Enter the two spells (harry then voldemort):

Reducto Confringo

Harry	Voldemort
Health : 80	95
Energy : 340	225

Enter the two spells (harry then voldemort):

Imperio AvadaKedavra

Harry	Voldemort
Health : 0	95
Energy : 320	125

Voldemort is the winner ..

Explanation

The green lines are the input spells (Harry Potter's spell (space) Voldemort's spell).

First, both of the wizards casted the same spell, that's why nothing has changed to their health however their energy decreased.

Secondly, Voldemort's spell was stronger which affected Harry Potter's health, knowing that the health is decreased according to **the difference between the spells casted from both sides**. By default, their energies are affected according to the power of the casted spells from both sides. When Harry used the shield, it protected him and skiped the casted spell of his enemy. The game continue in the same sequence.

SUBMISSION

- Your code should include the proper OOP Designs Concepts which means you should divide tour code into classes
- You should choose **suitable names each .cpp and .h files**.
- A folder for the Task Solution which should follow this naming convention:

NAME_HarryPotterBattle

- A document detailing the algorithm developed to solve the Task, and it should follow this naming convention:

NAME_DOCUMENTATION.pdf

- You should choose **suitable names for the functions and variables**.
- **Your code should be commented** to be easily followed up.
- You should send your submissions by email to

mia.electrical.training2021@gmail.com

- The email's subject field should be in the following format

NAME_TASK(2)

- The deadline for the submissions is **25/08 at 11:59 pm**