## My code is my resume

"Geektrust has tie ups with some of the best startups. And all one got to do is write code, the rest is taken care by the geektrust team."
Athira, now works at Sahaj Soft

Athira, Souranil and many more developers have solved Geektrust coding challenges to find great jobs.

* Get feedback on your coding skills. Detailed, handcrafted feedback on your code.
* Get priority and be treated as a premium candidate to directly connect with decision makers at companies.
* Get membership and win an exclusive Geektrust DEVELOPER t-shirt given when you write good code.


## GETTING STARTED

1. Getting the output right is important, but clean code is more important. You should absolutely read this post on what we look for in your code, and how to get started with the coding challenge.
2. Remember, we expect a command line app. So no web apps will be considered for evaluation.
3. Usage of non-essential 3rd party libraries will affect your evaluation.
4. Add a readme with how to get your code working, and how to test your code.
5. If you have questions on the coding challenges, your evaluation, or on companies, you can ping us on our Slack channel or mail us at devs@geektrust.in saying "Add to slack".

## PROBLEM CONTEXT

Our problem is set in the planet of Lengaburu...in the distant distant galaxy of Tara B. Our protagonists are King Shan, the emperor of Lengaburu, and the evil queen Al Falcone of Falicornia

Lengaburu has been at peace with her neighbours for over 50 years but now.... planet Falicornia dares attack Lengaburu. Write code to help King Shan identify the optimal force he should deploy to defend Lengaburu


## THE ARMIES



Al Falcone has a larger army than King Shan. But she cannot leave her home planet unprotected. So she will always deploy a sub set of her army. Moreover King Shan's army unit is 2 X more stronger than Al Falcone's.

## PROBLEM 1:THE TWO PLANETS

If Falicornia attacks Lengaburu with 2 Horses, 2 Elephants, 2 Armoured Tanks and 2 Sling Guns, Lengaburu will win the war if King Shan matches the attack with 1 Horse, 1 Elephant, 1 Armoured Tank and 1 Sling Gun.

But not so fast! Al Falcone will surely attack with a larger army. Your coding challenge is to identify what battalions, and how many units of each battalion King Shan should deploy to match Al Falcone's attack.

See next page for Rules of war

## THE RULES OF WAR

## Lengaburu's army has 100 Horses, 50 Elephants, 10 Armoured Tanks and 5 Sling Guns

Rule \#1. The Power Rule: Each Lengaburu army unit is 2 X more powerful than their Falcornia counterpart. Example: 1 Lengaburu Horse can counter 2 Falicornia Horses, 1 Lengaburu Elephant can counter 2 Falicornia Elephants and so on.

Rule \#2. The Like-to-Like Rule: Falicornia Horses battalion should be countered with Lengaburu horses battalion, Elephants with elephants and so on. Except when the battalion is completely exhausted (see Rule \#3).

Example: If Falicornia deploys 2 H, 4 E, 0 AT and 6 SG, Lengaburu should counter with 1 H, 2 E, 0 AT and 3 SG.

## THE RULES OF WAR (cont'd)

## Lengaburu's army has 100 Horses, 50 Elephants, 10 Armoured Tanks and 5 Sling Guns

Rule \#3. The Substitution Rule: When all units of a particular Lengaburu battalion is exhausted, an adjacent battalion can be used. 1 Elephant can replace 2 Horses (and 2 Horses can replace 1 Elephant), 1 Armoured Tank can replace 2 Elephants (and vice versa) and 1 Sling Gun can replace 2 Armoured Tanks (and vice versa). Note that only adjacent battalions can be used for substituting. Horses cannot replace Sling Guns as they are not adjacent.

Example: If Falicornia deploys 204 H, 20 E, 0 AT and 0 SG, Lengaburu should counter with $100 \mathrm{H}, 11 \mathrm{E}$ (1 Elephant has substituted 2 Horses which got exhausted at 100)

Example: If Falicornia deploys $0 \mathrm{H}, 0 \mathrm{E}, 14 \mathrm{AT}$ and 12 SG , Lengaburu should counter with $0 \mathrm{H}, 0 \mathrm{E}, 9$ AT and 5 SG (2 AT has substituted for 1 SG which got exhausted at 5)

Rule \#4. The Substitution Choice Rule: When there are 2 possibilities of substitution, then always a lower ranked battalion should be used (Horses is lower than Elephants, is lower than Armoured Tanks, is lower than Sling Guns)

Example: If Falicornia deploys 50 H, 104 E, 6 AT and 2 SG, Lengaburu should counter with 29 H, 50 E, 3 AT and 1 SG (4 Horses substituted for 2 Elephants instead of the higher ranked Armoured Tanks)

## SAMPLE INPUT \& OUTPUT

## 七 Sample Input \& Output |

Input: Falicornia attacks with $100 \mathrm{H}, 101 \mathrm{E}, 20$ AT, 5 SG
Expected Output: Lengaburu deploys 52 H, $50 \mathrm{E}, 10 \mathrm{AT}, 3 \mathrm{SG}$ and wins

ᄂ7 Sample Input \& Output ||
Input: Falicornia attacks with 150 H, 96 E, 26 AT, 8 SG
Expected Output: Lengaburu deploys 75 H, 50 E, 10 AT, 5 SG and wins

ᄂᄀ Sample Input \& Output |||
Input: Falicornia attacks with 250 H, 50 E, 20 AT, 15 SG
Expected Output: Lengaburu deploys $100 \mathrm{H}, 38 \mathrm{E}, 10 \mathrm{AT}, 5 \mathrm{SG}$ and loses

## CHECK LIST - SUBMITTING CODE

1. Please compress the file before upload. We accept .zip, .rar, .gz and .gzip
2. Name of the file should be the problem number you are solving. For e.g. if you have solved problem 1 from Set 2, please name your file 'Set2problem1.zip'.
3. We advise not to put your personal details in your solution as we maintain your anonymity with a company until there is genuine interest from them.
4. Please upload only source files and do not include any libraries or executables or node_modules folder.
5. You can expect your evaluation in 3-5 working days.
6. Yes, you can resubmit code based on our feedback. We accept 3 submissions in total. So do implement all feedback and make your submissions count!

## WHAT NEXT?

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