

Athira (ex-Motorola), Souranil (ex-ThoughtWorks) and 200+ developers have solved Geektrust coding challenges to find great jobs over the last 4 years

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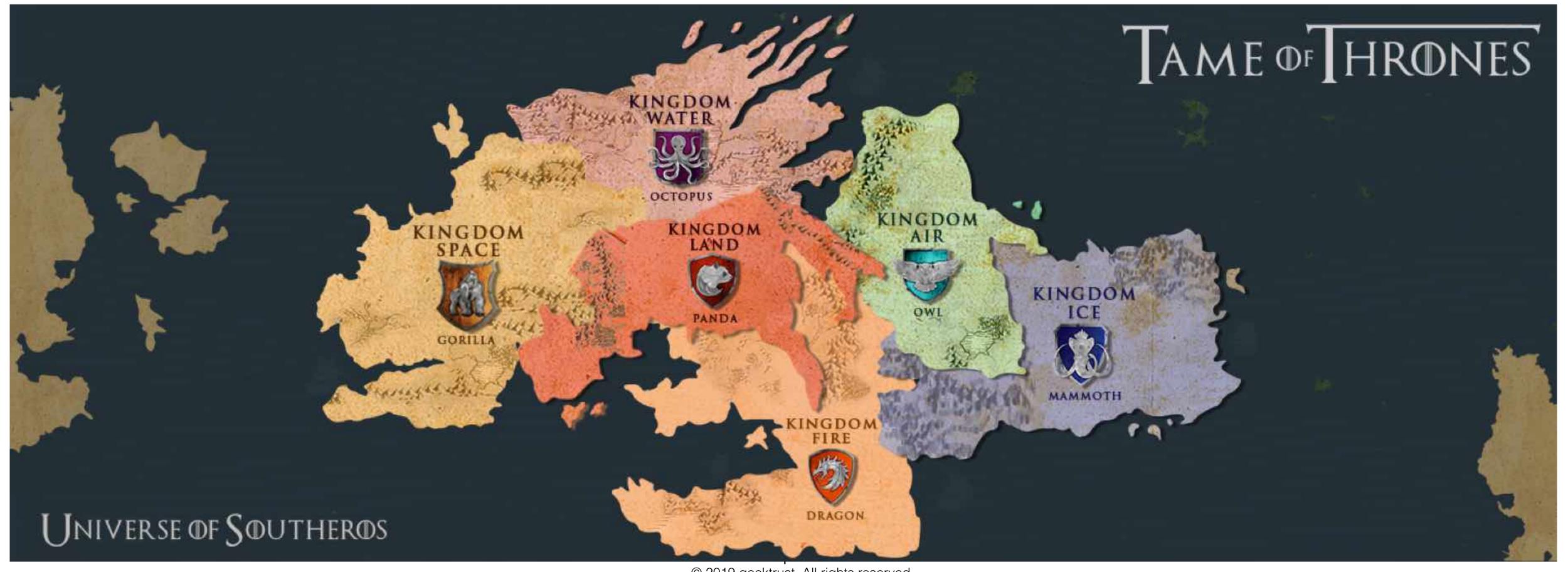
Over 2000 developers from the best companies in the world have trusted us with their code. And we don't look just at the output, but how you get it is more important. We care about how well modelled your code is, how readable, extensible, well tested it is. Have questions on the challenges or our evaluation? Ping us on the Geektrust <u>Slack channel</u> or mail us at <u>devs@geektrust.in</u> saying "Add to slack".

# Getting started

- 1. Getting the output right is important, but more important is clean code and how well designed your code is. You should **absolutely** read this post on what we look for in your code, and how to get started with the coding challenge.
- 2. See our evaluation parameters <u>here</u> and the badges to earn <u>here</u>.
- 3. We expect a command line app. So no web apps will be considered for evaluation. You don't need data stores either.

## Problem Context

There is no ruler in the universe of Southeros and pandemonium reigns. Shan, the gorilla king of the Space kingdom wants to rule all Six Kingdoms in the universe of Southeros. He needs the support of 3 more kingdoms to be the ruler.



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# A golden crown

Each kingdom has an animal emblem and Shan needs to send a message with the animal in the message to win them over.

SPACE emblem - Gorilla, LAND emblem - Panda, WATER emblem - Octopus,

ICE emblem - Mammoth, AIR emblem - Owl, FIRE emblem - Dragon.



#### Your coding challenge is to have King Shan send secret message to each kingdom and win them over.

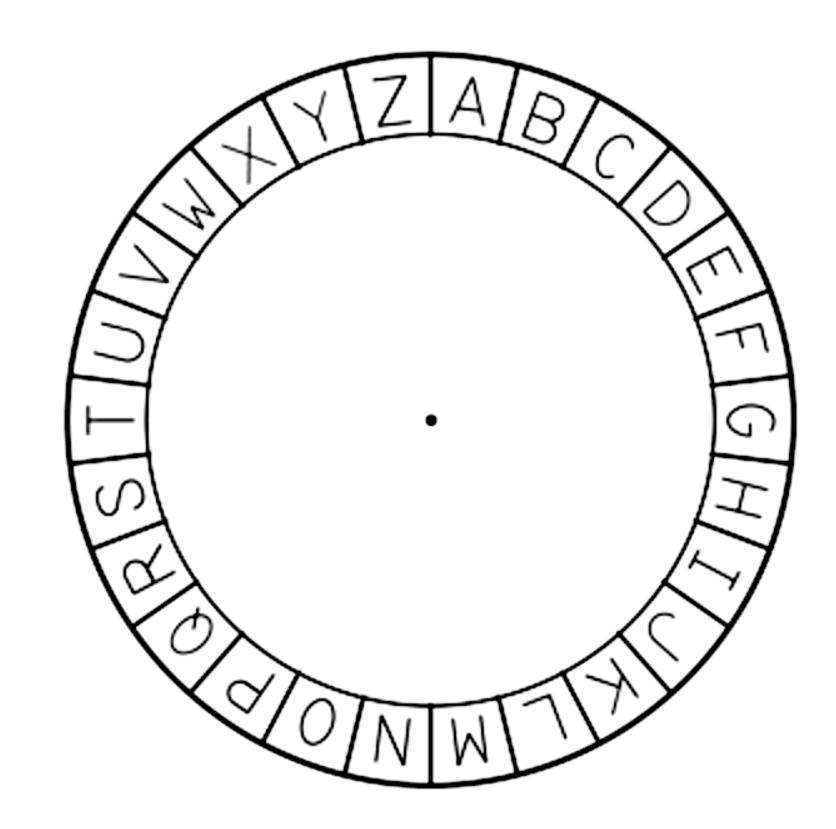
Once he wins 3 more kingdoms, he is the ruler! The secret message needs to contain the letters of the animal in their emblem. For example, secret message to the Land kingdom (emblem: Panda) needs to have the letter 'p','n','d' at-least once and 'a' at-least twice. If he sends "ahdvvnxxxautup" to the Land kingdom, he will win them over.

King Shan wants to make sure his secret message is not found by his enemies easily. So he decides to use the oldest of the ciphers 'Seasar cipher'. A cipher is a type of secret code, where you swap the letters around so that no-one can read your message.

To make the secret message encrypted, King Shan uses a secret key, which is the number of characters in the emblem. If King Shan wants to send a message to kingdom Air, he uses the number 3 as the cipher key, as emblem 'owl' has 3 characters. So, to encrypt the letter 'a', just move 3 letters clockwise on the message wheel, which will give the letter 'd'.

So if King Shan, sends the message "rozo" to Air, King Shan will receive the allegiance from Air. As "rozo" will decrypt to "olwl" and these letters contain the emblem characters 'o', 'w', 'l'.

If King Shan wants to send a message to kingdom Land, he uses the number 5 as the cipher key, as emblem 'panda' has 5 characters. To encrypt the letter 'a', just move 5 letters clockwise on the message wheel, which will give you the letter 'f'.



# Sample input & output

Your program should take the location to the test file as parameter. Input needs to be read from a text file, and output should be printed to the console.

#### Input Format

KINGDOM\_1 SECRET\_MSG\_TO\_KINGDOM\_1
KINGDOM\_2 SECRET\_MSG\_TO\_KINGDOM\_2
...
KINGDOM\_N SECRET\_MSG\_TO\_KINGDOM\_N

#### Sample Input

AIR ROZO
LAND FAIJWJSOOFAMAU
ICE STHSTSTVSASOS

Message send by Space Kingdom to other kingdoms

#### Output Format

RULER ALLY\_KINGDOM\_1, ALLY\_KINGDOM\_N

#### Sample Output

SPACE AIR LAND ICE

More sample input output scenarios.

Please stick to the Sample input output format as shown. This is very important as we are automating the correctness of the solution to give you a faster evaluation. You can find some sample input output files <u>here</u>.

#### Sample Input 1

LAND FDIXXSOKKOFBBMU
ICE MOMAMVTMTMHTM
WATER SUMMER IS COMING
AIR OWLAOWLBOWLC
FIRE AJXGAMUTA

Message send by Space Kingdom to other kingdoms

#### Sample Input 1

AIR OWLAOWLBOWLC
LAND OFBBMUFDICCSO
ICE VTBTBHTBBBOBAB
WATER SUMMER IS COMING

Message send by Space Kingdom to other kingdoms



SPACE LAND ICE FIRE

Ruler Kingdom (SPACE) and its allies

#### Sample Output 1

NONE

SPACE Kingdom did not get enough allies

### Node - Instructions to Build & Execute

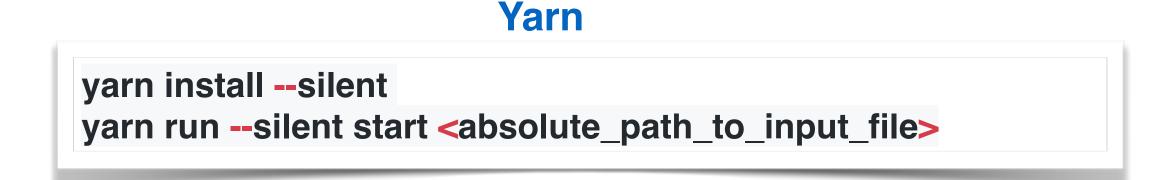
We execute NodeJS projects using Yarn/NPM execution environment. For Standalone Javascript we use Node execution environment. In all cases your **main file** should be named as **geektrust.js**.

#### Solution with build file

We support both NPM and Yarn build systems. Your project should have the package.json with all your dependencies. In that file make sure you have an entry for the start script which points to the execution of geektrust.js.

We then execute the solution by the following command. Read more.

# npm install --silent npm start --silent <absolute\_path\_to\_input\_file>



#### Solution without build file

For a solution without build system, we want you to name your **main** file as **geektrust.js**. This is the file that will contain your main method. We then execute the solution by the following command. Read more.

node geektrust.js

## Supported Language & Versions

Code submissions are run against a Linux virtualized instance.

Supported language and versions are below:

Language	Supported versions	Supported Tools
C#	dotnet 2.2	
Go	1.12.x	Go build tool
Java	1.8, 1.11	maven, gradle
Node.js	v8.16.x, v10.16.x v12.6.x	npm, yarn
Python	2.7, 3.7	pip
Ruby	1.9.x, 2.2.x, 2.6.x	rake

You can upload code in any version of Clojure, Scala, Kotlin, PHP, Erlang. We don't have automated tests for these languages yet. So your evaluation will take longer than the others.

## 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 set number you are solving. For e.g. if you have solved Family problem, please name your file 'Family.zip'.
- 3. Please upload only source files and do not include any libraries or executables or node\_modules folder.
- 4. Usage of non-essential 3rd party libraries will affect your evaluation.
- Add a readme with how to get your code working, and how to test your code.
- 6. Your solution will be downloaded & seen by companies you're interested in. Hence we advise you to provide a solution that will work on any system without any code changes/manual setup.

## what next?

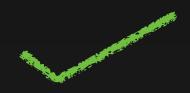
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