

## Steps to Deploy and test our ERC-20 token

### • What our Token is and how it works:

- > The name of our token is GTDToken which stands for Grab the Deal Token and the symbol is "GTD".
- > Here token can be considered as any product. We are currently assuming token to be a COVID-vaccine.
- > The seller will have some predefined supply of vaccines and can also add more stock(tokens).
- > The customers will express the interest in the product and they can donate some amount in ethers to the seller in exchange for the product. That is all they have to do.
- > All the customers will be maintained in a queue internally in the order in which they have expressed their interest.
- > When the seller is ready he will initiate the selling. The customers will be popped out from the queue one by one and then the token is transferred to each customer (There are appropriate checks for queue length and the stock. For example if there are 150 customers in the queue and only 100 vaccines are available, vaccines will be sent to top 100 customers and 50 customers will be left in the queue. They will be supplied with vaccines when the new stock arrives.)
- > Once the initiate selling is completed, the tokens balance will be updated on both the seller and the customer end and you can check the same in Get Vaccine Count by Address section of the deployed contract.

### • Steps to Deploy in Remix

- 1) Pull the GTDToken.sol file from our github page folder GRABTHEDEAL-Dapp/gtdtoken-contract/contracts/GTDToken.sol. Git Hub Repository - <https://github.com/sakshirdkar/GrabTheDeal-dapp>
- 2) Open remix IDE and Create a new sol file and copy the code from this file into your file.
- 3) Compile the sol file.
- 4) Go to publish tab and select 'Injected web3' as the environment.
- 5) In the Contract section - Select the GTDToken Contract
- 6) Click on Deploy
- 7) After Metamask pops up, confirm the transaction.
- 8) Your token is now deployed.

### • Steps to Deploy in Ganache

- 1) Pull the gtdtoken-contract folder from our github page folder GRABTHEDEAL-Dapp/gtdtoken-contract. Git Hub Repository - <https://github.com/sakshirdkar/GrabTheDeal-dapp>
- 2) Install truffle using the command - `npm install -g truffle`.
- 3) Download Ganache from the official website - <http://trufflesuite.com/ganache/>
- 4) Open terminal and navigate to GRABTHEDEAL-Dapp/gtdtoken-contract/contracts folder by the following command - `cd GRABTHEDEAL-Dapp/gtdtoken-contract/`

- 5) Please make sure that the Ganache Blockchain Network is running on the system.
- 6) To compile the contract type - *truffle compile*.
- 7) To deploy the smart contract file type the command - *truffle migrate --reset*
- 8) The smart contract is now deployed.

• **Additional information - Publishing the token**

- 1) Copy the transaction hash value from the output window and go to <https://ropsten.etherscan.io/> and paste the transaction hash and click on search.
- 2) Click on the contract address which you can find in the 'Interacted With (To):' section
- 3) In the Contract tab, You can verify and publish the smart contract.

• **Usage Instructions of web Interface / Testing the ERC-20 Token and internal working of the token**

- > Pull the GRABTHEDEAL-dapp folder from our github page. <https://github.com/sakshirdkar/GrabTheDeal-dapp>
- > Open terminal and navigate to the gtdtoken-app folder and run the application.  
cd gtdtoken-app  
npm start
- > A react application will start on the specified port localhost port.
- > You can interact with the application easily.
- > You will be able to see the customer User Interface.
- > Add New Stock and Initiate Selling are two functions which only sellers can perform. (we can make you the seller if required) Send an email to either [sakshirdkar@gmail.com](mailto:sakshirdkar@gmail.com) or [srisaiomkar@gmail.com](mailto:srisaiomkar@gmail.com) )
- > The customers should click on Express interest from multiple accounts if required. ( We will be storing all the addresses in a queue to satisfy the first come first serve strategy )
- > The customer can put in the desired amount of ethers t and click on *Donate Ethers* to donate in exchange of the vaccine(token).
- > you can then email us to any of the above two email addresses.
- > We will then initiate the selling process. ( the addresses will be fetched from the queue and tokens will be sent to each of the address )
- > After this the tokens(vaccine) balance will be updated on both the seller and the customer end and you can check the same by giving the appropriate address and clicking on Get Vaccine count by Address button.