**# Getting started**

`git clone <https://gitlab.com/abhiramts007/docver-chd-group-project>`

Or

`git clone https://github.com/AbhiramTS/chdProject`

`sudo docker-compose up`

The application should be available at `http://localhost:4200`

---------------------------------------------------------

**# DOCVER**

Simple document verification example of a Sawtooth application.

**## Introduction**

This is a minimal example of a Sawtooth application, with a javascript based transaction processor and angular based client. This example demonstrates a simple use case, where officials can register for birth/death, and generate a certificate which can then be reverified at any point of time in the feature.

1. Register for birth/death certificate

2. Generate the certificate

3. Reverify the certificate at any point of time

4. Search the certificate at any point of time

All transactions have the same 6 hex digit prefix, which is the first 6 hex characters of the SHA-512 hash of "docver" (that is, "2690bc").

The docver is identified by with a corresponding public/private keypair.

The transaction id of corresponding doccument is 70 hex digit address derived from:

\* a 6-hex character prefix (the "docver" Transaction Family namespace) and

\* a 58 bit hex characters of the SHA-512 that is calculated based on user data and

\* a 6 bit based on type of certificate

## Components

The project contains two parts :

I)Client Application ,written in Angular

II)Transaction Processor ,written in JavaScript

1. The client application consist of:

\* `angular application` : contains the client application that can make transactions to the validator through REST API

The client container is built with Dockerfile.

2. The Transaction Processor in javascript.

TransactionProcessor is a generic class for communicating with a validator and routing transaction processing requests to a registered handler.

index.js has the Transaction Processor class.

The handler class is application-dependent and contains the business logic for a particular family of transactions.

DocVerHandler.js has the handler class.

The javascript transaction processor has the following files :

a)index.js (transaction processor class)

b)package.json

c)Dockerfile

d)DocVerHandler.js (handler class)

## Docker Usage

### Prerequisites

This example uses docker-compose and Docker containers. If you do not have these installed please follow the instructions here: https://docs.docker.com/install/

\*\*NOTE\*\*

Any Linux distributions which support Docker should work.

**### Building Docker containers**

Before starting the project make sure the Docker service is up and running.

To start up the environment, perform the following tasks:

a)Open a terminal window.

b)Change your working directory to the same directory where you saved the Docker Compose file.

c)Run the following command:

$sudo docker-compose up --build

The `docker-compose.yml` file creates a genesis block, which contain initial Sawtooth settings, generates Sawtooth, and starts the Validator, Settings TP, docVer TP, and REST API.

To stop the validator and destroy the containers, type `^c` in the docker-compose window, wait for it to stop, then type

$sudo docker-compose down