**TECHNICAL DOCUMENTATION**

About the application:

To create an application which is used for creating a terraform code depend upon the requirement of the development/testing team.

Purpose

* By this application it will be helpful to create the terraform script easily and more work can be finished within less time.
* This application will also help the non-DevOps engineer to create the terraform script.
* Resource can be created easily.

How can we Achieve?

We will be using following techniques –

|  |  |
| --- | --- |
| Tools | Purpose of Using |
| HTML | To create frontend. |
| CSS | For styling the frontend. |
| JS | For adding functionality to the element in application. |
| GitHub repo | For retrieving the terraform module. |

Block Diagram of Application-

On Frontend page we will be having two parts-

* Left panel -: In this we have two blocks resource and data resource.
* Right panel -: In this we have on details blocks.

**RESOURCE BLOCK: -**

* In resource Block we have the following resources –

1. aws\_s3\_bucket
2. aws\_iam\_role
3. aws\_cloudwatch\_log\_group
4. aws\_api\_gateway
5. aws\_lambda\_function

* Initially for version 1.0 we will be adding resource S3, Lambda Function, IAM role, cloud watch, API gateway
* In these resources , we will be adding the plus button (+).
* After clicking the plus button, the resource will add to the right-side block, we can add multiple number of resources at the same time.
* On clicking plus button we will get detail block on the right for each resource.
* for suppose we clicked on the (+) button beside the S3 it will ask for the name and region. (For version 1.0 we will not make the name and region field as the required one).

**DATA RESOURCE BLOCK: -**

In Data Resource Block we have the following resources –

1. aws\_s3\_bucket\_arn
2. aws\_iam\_role\_arn
3. aws\_cloudwatch\_log\_group\_arn
4. aws\_api\_gateway\_arn
5. aws\_lambda\_function\_arn

* In data resource block the functionality are same as resource block but the only difference is that we are fetching the arn of resource.

**Resources Details**: -

* We will be creating a block with the name of the **Resources Details**.
* Here we will have fields for entering the project name and a GitHub repo. In which project name field name will be mandatory.
* When we click on the plus buttons which is placed beside the resource and resource arn , it will display the resource and resource arn respectively below the Project name and it will ask for resource name and the resource region.
* For the version 1.0 we will not make the name and region field as required.
* If we do not mention the name in the name field it will take the name same as project name.
* At the bottom we will be adding the save and submit button.
* One may think that why the save button is needed as we have submit button which can do the same work. The intention of adding the save button is that, in some case if don’t know which resources to add exactly we can just save some of those which we know and confirm from the team and then add or edit the resources accordingly.
* On clicking SUBMIT button function is called and it will retrieve the module from DevOps GitHub repo and create the main.tf file in the user gitHub repo .

1. Git Repository (DevOps Engineer repo.): -

* We will be creating a git repo., in which there will be number of modules, in each module we will have a terraform script of different resources.
* When we click the submit button which is present on the Resources details page, It will pass the resources details (name, region etc.) to the git repository and by comparing with the modules it will create a script.
* Once the script is created, we push the script to git repo. given by them/we can save the script in our gitHub repo. and give the git url to the respective team.

**ADVANTAGES -:**

* It will reduce time as anyone can generate terraform script.
* It will also create terraform script of multiple resources at a time.
* We can also add the future resources as the version 1.0 is completed.

CHALLENGES-:

CONCLUSION-:

By this application we can create the script easily and the time required for creating the terraform script reduces.