# ABSTRACT

The following is a technical report on the activities done during an Industrial Practical Training took place at iPF Softwares Dar Es Salaam. iPF Softwares is located at kimara temboni (Morogoro road), .iPF Softwares focuses on using computers to test, create, develop and provide software programs for other businesses or clients.Through my industrial training I have been supervised by a iPF Softwares staffs with different software development skills and tools for the period of four weeks with different practices under supervision and cooperation with fellow trainees so as I can acquire new knowledge and experience as intended .At the end of the field I have been exposed to different technologies based software development with basics, fundamental and advanced practices and concept reviews from different supervisors governed with discipline, manner and punctuality. The report consists of the details on activities that I have done during training including acquired skills and technical knowledge provided by iPF Softwares staffs.

# DECLARATION

I **Sydney Kibanga** hereby declare that the report has been prepared by myself to fulfill the curriculum requirements of information technology offered by computer science information system (CSISE) department of St. Joseph college of Engineering and Technology.

…………………………………… ……………………………………

**Name of student** **Name of Supervisor**

…………………………………… ……………………………………..

Signature of student Signature of supervisor

…………………………………………. …………………………………………

INTERNAL EXAMINER EXTERN AL EXAMINER

# AKNOWLEDGEMENT

I would like to provide my sincerely and inner gratitude to Our Almighty for giving healthy and courage throughout the practical training period. I felt sense of honor and trusted for the special opportunity to conduct the Industrial practical training at iPF Softwares.

I would like to express my special thanks to Mr Nelson and iPF Softwares management at large for letting me in to do my IPTR to their Organization. This training would not be possibly done without support of iPF Softwares staffs especially my supervisor **Mohamed M.M** with all staffs of iPF Softwares for supervising me for the provision of support and providing more knowledge on my carrier studies.

Also I convey my great thanks to my Head of department **Mr Richard Mkechera** of department of Computer Science Information System Engineering (CSISE) and our lovely class advisors **Mr James Kibona.**

Finally, I thank my parents who kneels pray for me and support during the practical training period.

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# LIST OF ABBREVIATION

| Number | ABBREVIATION | DESCRIPTION |
|---|---|---|
| 01. | MVC | Model, View, and Control. |
| 02. | MySQL | My Structured Query Language |
| 03. | CRUD | Create, Read, Update and Delete. |
| 04. | CSRF | Cross-Site Request Forgery |
| 05. | HTML | Hypertext Markup Language |

# CHAPTER ONE

## INTRODUCTION

### Overview

I have prepared this report basically for the purpose of submitting it to the St. Joseph college of Engineering and Technology (SJCET) as part of practical training assessment. Practical training program as it is a very useful tool to enable the students to apply practically what she or he has learnt theoretically at the different modules. This is intended to focus on encouraging students to analyze some of the causes and implications of many of the most pressing problems confronting people at their work places. This enhances and provides thoughts, discussions and debates among students in their practical experiences.

### FIELD WORKS PLACEMEMNT

The fieldwork placement was four weeks program which started from 18/7/2022 to 22/8/2021 in iPF Softwares. The fieldwork program includedthe involvement with staff at the campany.

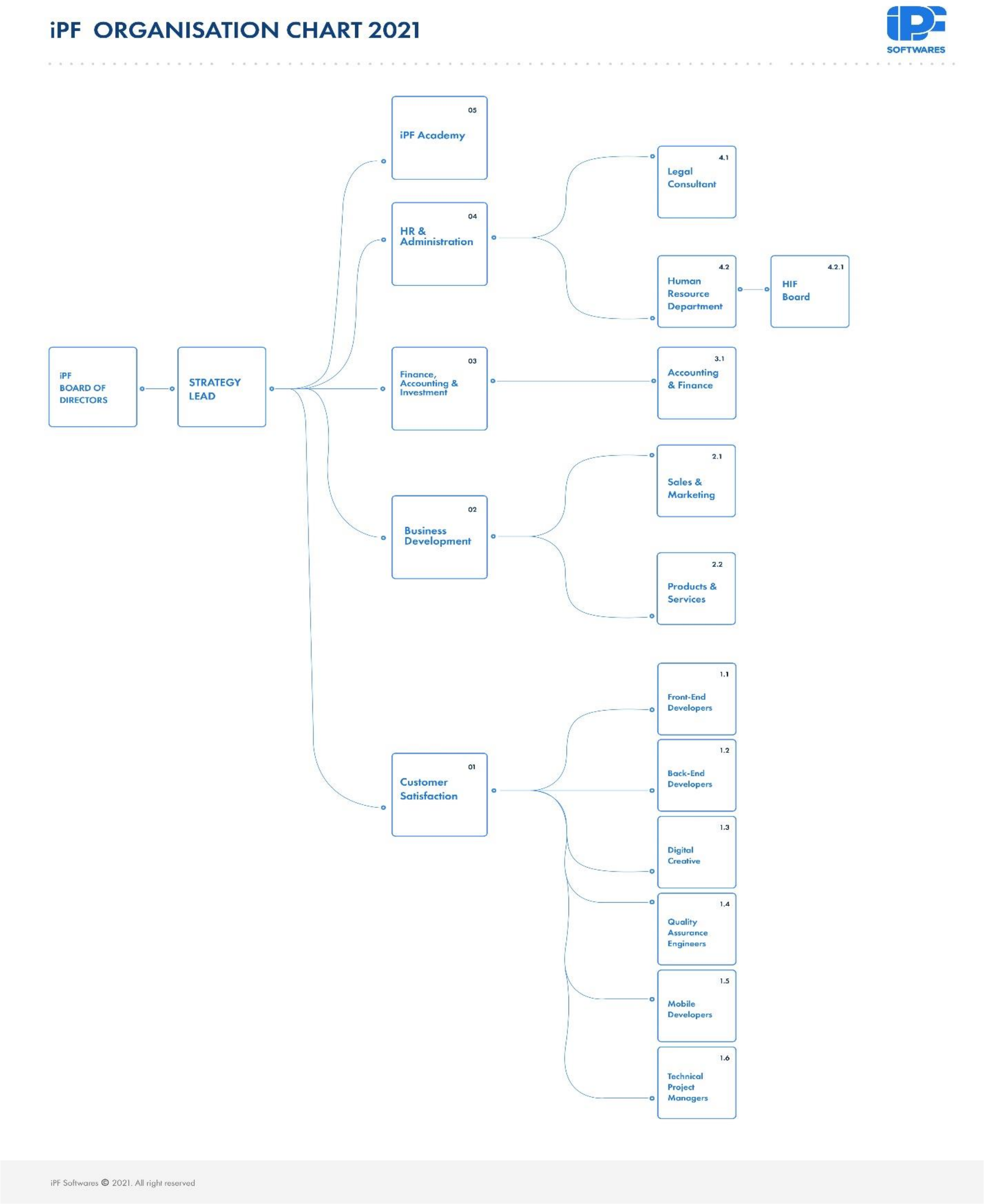
### Vision

We want to be part of the solution by building and delivering impactful digital solutions that will disrupt the way people do things through technology.

### Mission

Our purpose is to make sure people in Africa have access to world class digital tools and solutions that will impact their lives economically and socially. We do that by partnering with different organisations and help them design, develop and innovate technological solutions and make sure they work and drive the impact intended.

# iPF SOFTWARES ORGANISATION STRUCTURE



# CHAPTER TWO

## Introduction

Various tasks were performed during the practical training study in assistance of host supervisor, This chapter addresses those major tasks and activities to which I was assigned to, also the way it was done and how improved my IT technical knowledge.

TAILWIND CSS.

Tailwind CSS can be used to make websites in the fastest and the easiest way. Tailwind CSS is basically a utility-first CSS framework for rapidly building custom user interfaces. It is a highly customizable, low-level CSS framework that gives you all of the building blocks you need to build bespoke designs without any annoying opinionated styles you have to fight to override.

The beauty of this thing called tailwind is it doesn’t impose design specification or how your site should look like, you simply bring tiny components together to construct a user interface that is unique. What Tailwind simply does is take a ‘raw’ CSS file, processes this CSS file over a configuration file, and produces an output.

Why Tailwind CSS?

Faster UI building process
It is a utility-first CSS framework which means we can use utility classes to build custom designs without writing CSS as in traditional approach.

**Advantages of Tailwind CSS:**

No more silly names for CSS classes and Id’s.
Minimum lines of Code in CSS file.
We can customize the designs to make the components.

Makes the website responsive.

Makes the changes in the desired manner.

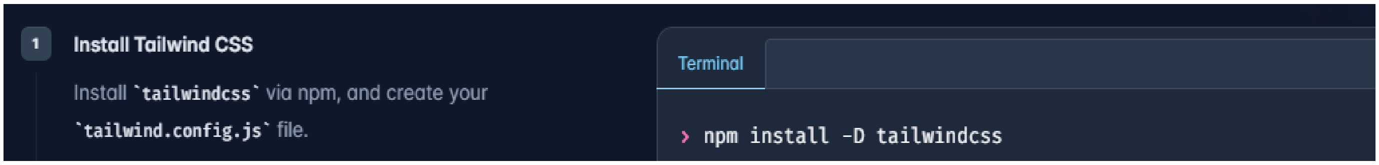
CSS is global in nature and if make changes in the file the property is changed in all the HTML files linked to it. But with the help of Tailwind CSS we can use utility classes and make local changes.

Installation:

Method 1: Install Tailwind via npm

Step 1:npm init -y

Step 2:npm install tailwindcss



1 **Install Tailwind CSS**

Install `tailwindcss` via npm, and create your `tailwind.config.js` file.

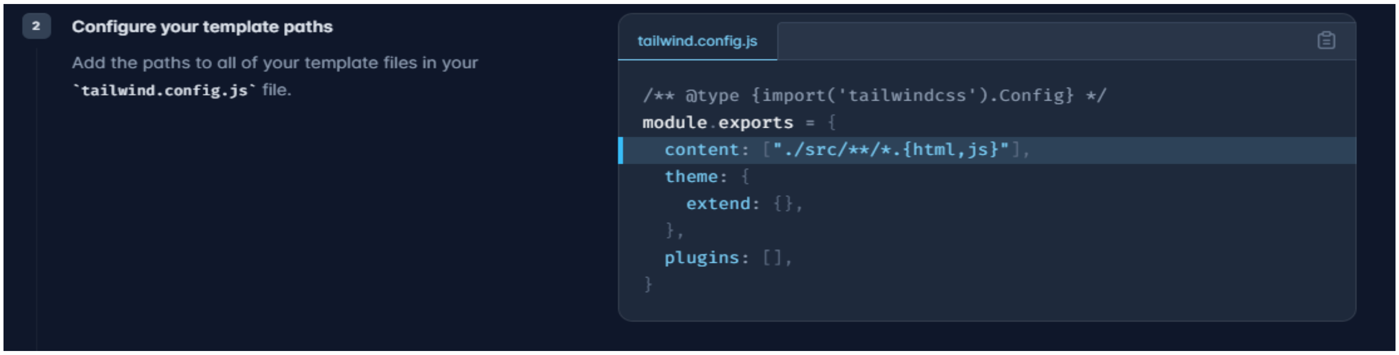
```
> npm install -D tailwindcss
```

Step 3:Use the @tailwind directive to inject Tailwind’s base, components, and utilities styles into your CSS file.

@tailwind base;

@tailwind components;

@tailwind utilities;



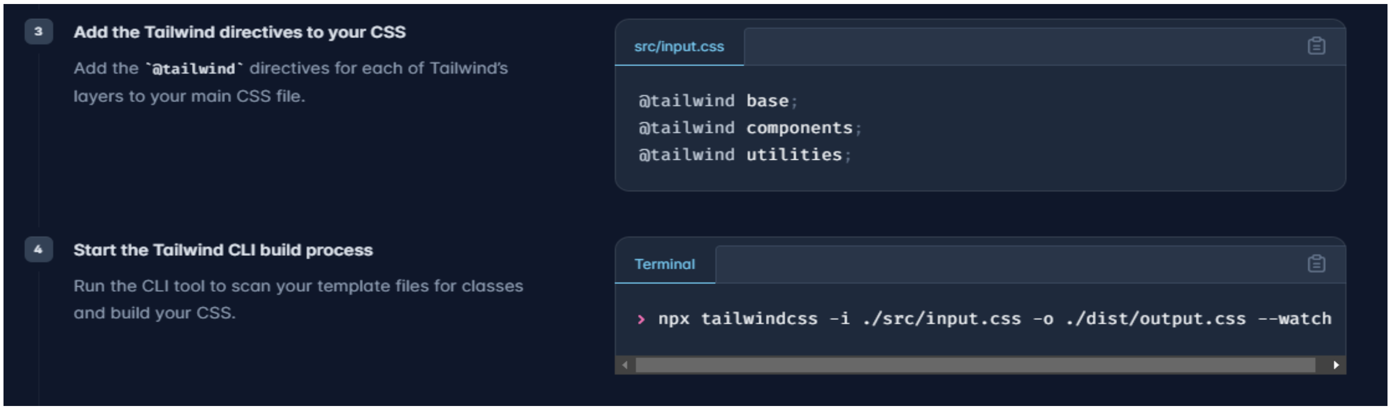
2 **Configure your template paths**

Add the paths to all of your template files in your `tailwind.config.js` file.

```
/** @type {import('tailwindcss').Config} */
module.exports = {
  content: ["./src/**/*.{html,js}"],
  theme: {
    extend: {},
  },
  plugins: [],
}
```

Step 4:npx tailwindcss init

This is used to create a config file to customize the designs. It is an optional step.



3 **Add the Tailwind directives to your CSS**

Add the `@tailwind` directives for each of Tailwind's layers to your main CSS file.

src/input.css

```
@tailwind base;
@tailwind components;
@tailwind utilities;
```

4 **Start the Tailwind CLI build process**

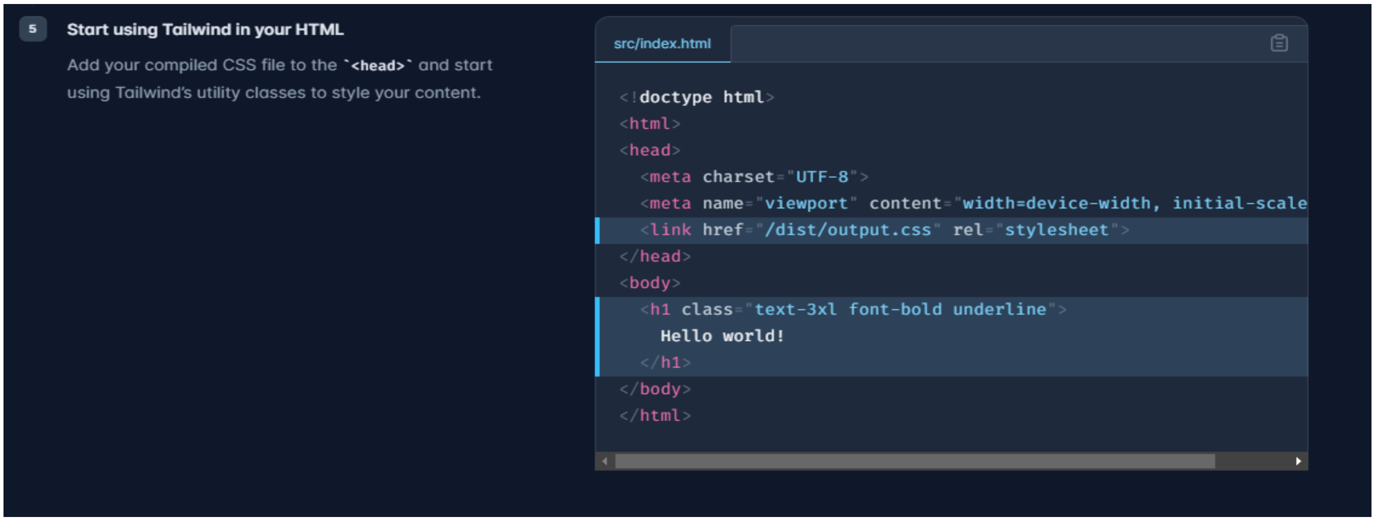
Run the CLI tool to scan your template files for classes and build your CSS.

Terminal

```
> npx tailwindcss -i ./src/input.css -o ./dist/output.css --watch
```

Step 5:npx tailwindcss build styles.css -o output.css

This command is used to compile style.css is the file which has to be compiled and output.css is the file on which it has to be compiled.If the file output.css is not created earlier then it will automatically created.



5 **Start using Tailwind in your HTML**

Add your compiled CSS file to the `<head>` and start using Tailwind's utility classes to style your content.

src/index.html

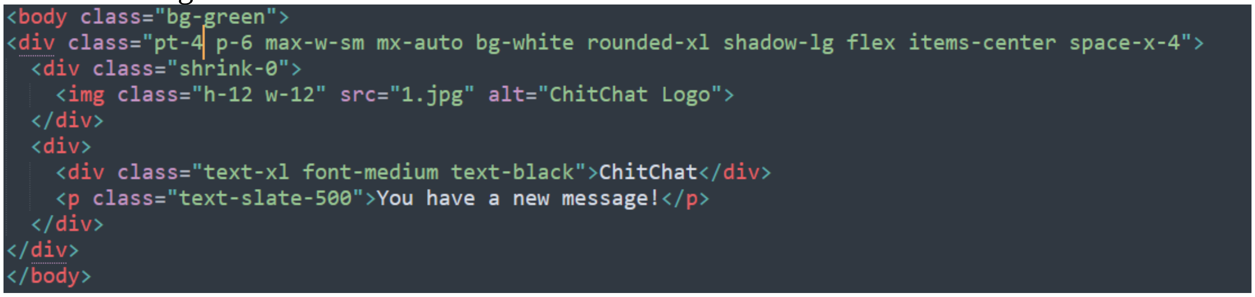
```
<!doctype html>
<html>
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale
  <link href="/dist/output.css" rel="stylesheet">
</head>
<body>
  <h1 class="text-3xl font-bold underline">
    Hello world!
  </h1>
</body>
</html>
```

## LESSON LEARNT IN TAILWIND CSS.

I learnt to build basic and simple components before the actual implementation  of TAILWIND CSS in the iPF Fund Request App.

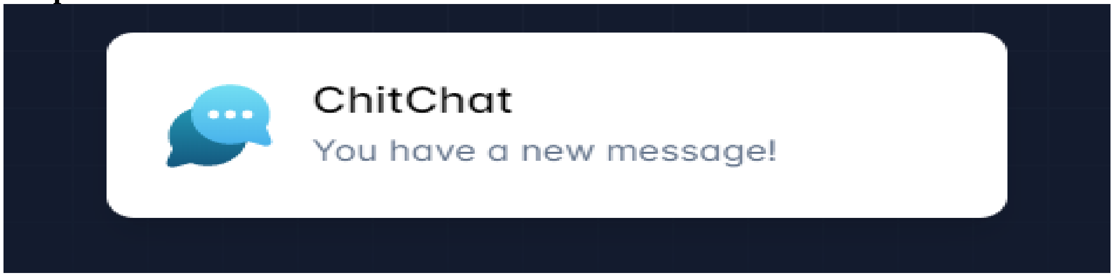
The following are some of the list of tailwind concepts that I leant

Responsive card design



```
<body class="bg-green">
<div class="pt-4 p-6 max-w-sm mx-auto bg-white rounded-xl shadow-lg flex items-center space-x-4">
  <div class="shrink-0">
    <img class="h-12 w-12" src="1.jpg" alt="ChitChat Logo">
  </div>
  <div>
    <div class="text-xl font-medium text-black">ChitChat</div>
    <p class="text-slate-500">You have a new message!</p>
  </div>
</div>
</body>
```

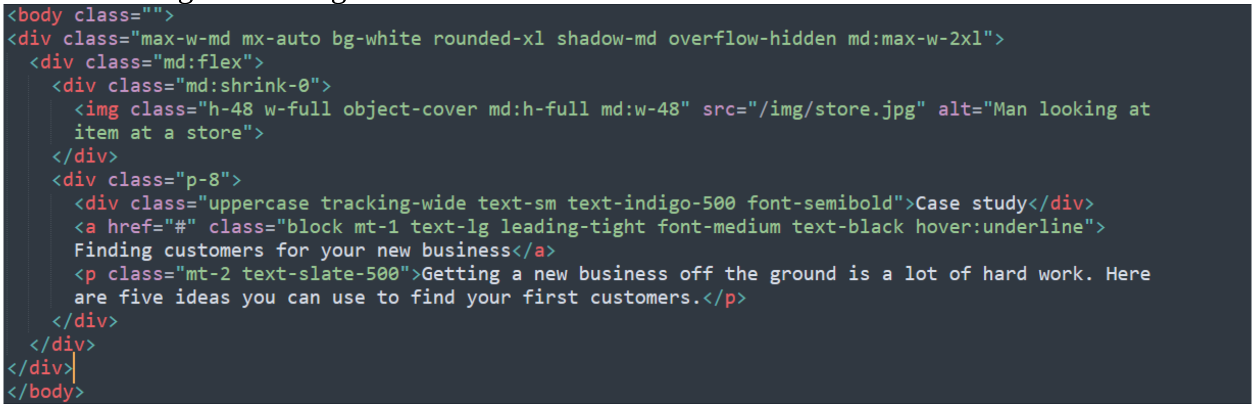
**Output:**



ChitChat

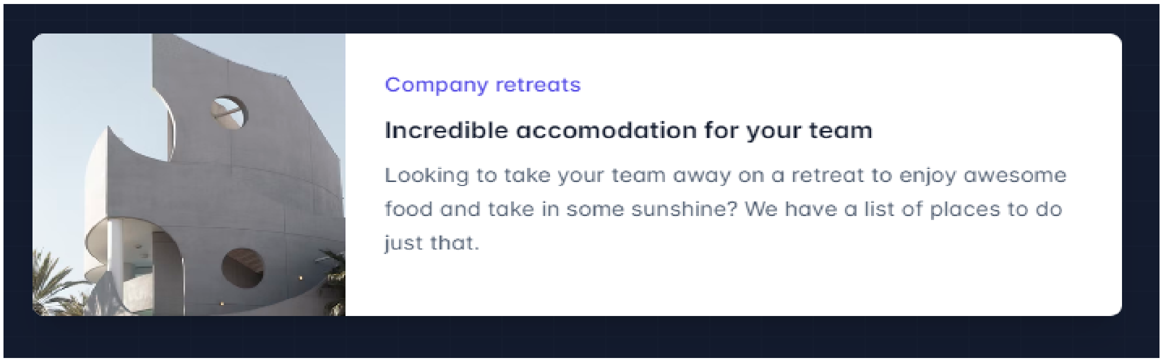
You have a new message!

Responsive card design with image



```
<body class="">
<div class="max-w-md mx-auto bg-white rounded-xl shadow-md overflow-hidden md:max-w-2xl">
  <div class="md:flex">
    <div class="md:shrink-0">
      <img class="h-48 w-full object-cover md:h-full md:w-48" src="/img/store.jpg" alt="Man looking at
      item at a store">
    </div>
    <div class="p-8">
      <div class="uppercase tracking-wide text-sm text-indigo-500 font-semibold">Case study</div>
      <a href="#" class="block mt-1 text-lg leading-tight font-medium text-black hover:underline">
      Finding customers for your new business</a>
      <p class="mt-2 text-slate-500">Getting a new business off the ground is a lot of hard work. Here
      are five ideas you can use to find your first customers.</p>
    </div>
  </div>
</div>
</body>
```

Output:



Company retreats

Incredible accomodation for your team

Looking to take your team away on a retreat to enjoy awesome food and take in some sunshine? We have a list of places to do just that.

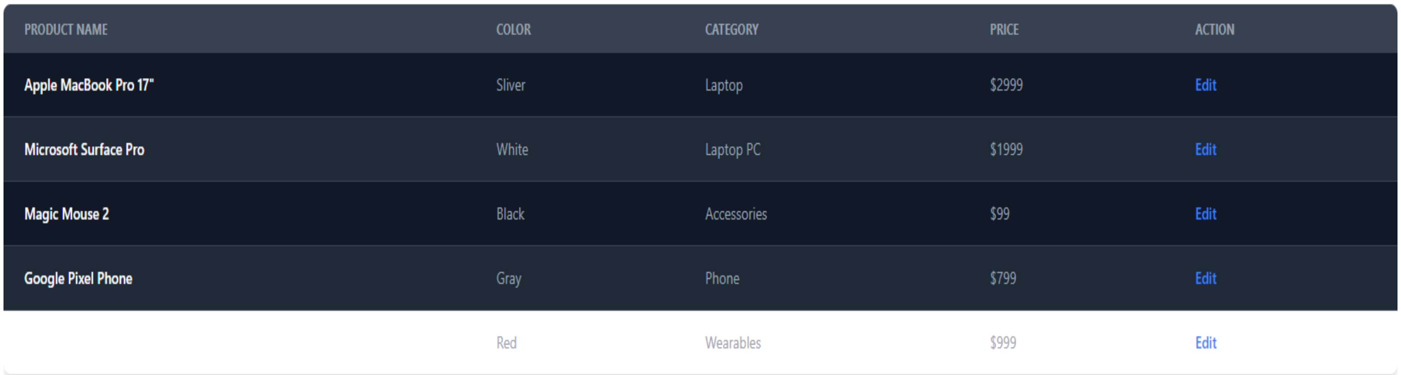
## Tables implementation

```
<div class="overflow-x-auto relative shadow-md sm:rounded-lg">
    <table class="w-full text-sm text-left text-gray-500 dark:text-gray-400">
        <thead class="text-xs text-gray-700 uppercase bg-gray-50 dark:bg-gray-700 dark:text-gray-400">
            <tr>
                <th scope="col" class="py-3 px-6">
                    Product name
                </th>
                <th scope="col" class="py-3 px-6">
                    Color
                </th>
                <th scope="col" class="py-3 px-6">
                    Category
                </th>
                <th scope="col" class="py-3 px-6">
                    Price
                </th>
                <th scope="col" class="py-3 px-6">
                    Action
                </th>
            </tr>
        </thead>
        <tbody>
            <tr class="bg-white border-b dark:bg-gray-900 dark:border-gray-700">
                <th scope="row" class="py-4 px-6 font-medium text-gray-900 whitespace-nowrap dark:text-white">
                    Apple MacBook Pro 17"
```

```
      </th>
      <td class="py-4 px-6">
        Sliver
      </td>
      <td class="py-4 px-6">
        Laptop
      </td>
      <td class="py-4 px-6">
        $2999
      </td>
      <td class="py-4 px-6">
        <a href="#" class="font-medium text-blue-600 dark:text-blue-500 hover:underline">Edit</a>
      </td>
    </tr>
    <tr class="bg-gray-50 border-b dark:bg-gray-800 dark:border-gray-700">
      <th scope="row" class="py-4 px-6 font-medium text-gray-900 whitespace-nowrap dark:text-white">
        Microsoft Surface Pro
      </th>
      <td class="py-4 px-6">
        White
      </td>
      <td class="py-4 px-6">
        Laptop PC
      </td>
      <td class="py-4 px-6">
        $1999
      </td>
      <td class="py-4 px-6">
        <a href="#" class="font-medium text-blue-600 dark:text-blue-500 hover:underline">Edit</a>
      </td>
    </tr>
    <tr class="bg-white border-b dark:bg-gray-900 dark:border-gray-700">
      <th scope="row" class="py-4 px-6 font-medium text-gray-900 whitespace-nowrap dark:text-white">
        Magic Mouse 2
      </th>
      <td class="py-4 px-6">
        Black
      </td>
      <td class="py-4 px-6">
        Accessories
      </td>
      <td class="py-4 px-6">
        $99
      </td>
      <td class="py-4 px-6">
        <a href="#" class="font-medium text-blue-600 dark:text-blue-500 hover:underline">Edit</a>
      </td>
    </tr>
    <tr class="bg-gray-50 border-b dark:bg-gray-800 dark:border-gray-700">
      <th scope="row" class="py-4 px-6 font-medium text-gray-900 whitespace-nowrap dark:text-white">
        Google Pixel Phone
      </th>
      <td class="py-4 px-6">
        Gray
      </td>
```

```
        <td class="py-4 px-6">
          Phone
        </td>
        <td class="py-4 px-6">
          $799
        </td>
        <td class="py-4 px-6">
          <a href="#" class="font-medium text-blue-600 dark:text-blue-500 hover:underline">Edit</a>
        </td>
      </tr>
      <tr>
        <th scope="row" class="py-4 px-6 font-medium text-gray-900 whitespace-nowrap dark:text-white">
          Apple Watch 5
        </th>
        <td class="py-4 px-6">
          Red
        </td>
        <td class="py-4 px-6">
          Wearables
        </td>
        <td class="py-4 px-6">
          $999
        </td>
        <td class="py-4 px-6">
          <a href="#" class="font-medium text-blue-600 dark:text-blue-500 hover:underline">Edit</a>
        </td>
      </tr>
    </tbody>
  </table>
</div>
```

Output:



| PRODUCT NAME | COLOR | CATEGORY | PRICE | ACTION |
|---|---|---|---|---|
| Apple MacBook Pro 17" | Sliver | Laptop | $2999 | Edit |
| Microsoft Surface Pro | White | Laptop PC | $1999 | Edit |
| Magic Mouse 2 | Black | Accessories | $99 | Edit |
| Google Pixel Phone | Gray | Phone | $799 | Edit |
|  | Red | Wearables | $999 | Edit |

# CHAPTER THREE

## LARAVEL(PHP).

Introduction**:** Laravel is the fastest growing PHP framework and is used by thousands of developers around the globe to rapidly build robust web applications.

Laravel attempts to take the pain out of development by easing common tasks used in the majority of web projects, such as authentication, routing, sessions, and caching. Laravel aims to make the development process a pleasing one for the developer without sacrificing application functionality.

### Setting up laravel

- Create a laravel project by running the following command on your terminal.

```
composer create-project laravel/laravel myProject
```

---

- Move into the project directory by running the following command on your terminal.

```
cd myProject
```

- Next supply your database credentials in your **.env** file and create a database for use with your application (If it does not exist already).
- Next run database migration to create the *users* table and the *password_resets* table by running the following command on your terminal.
- Then execute the following command to start the server.

```
php artisan serve
```

### Laravel Framework Features that Make it Popular

PHP frameworks' market is a bit crowded because of several competitors fighting for the limelight and attention. However, the robust Laravel features list is something that makes it stand out.

1. Blade Template Engine

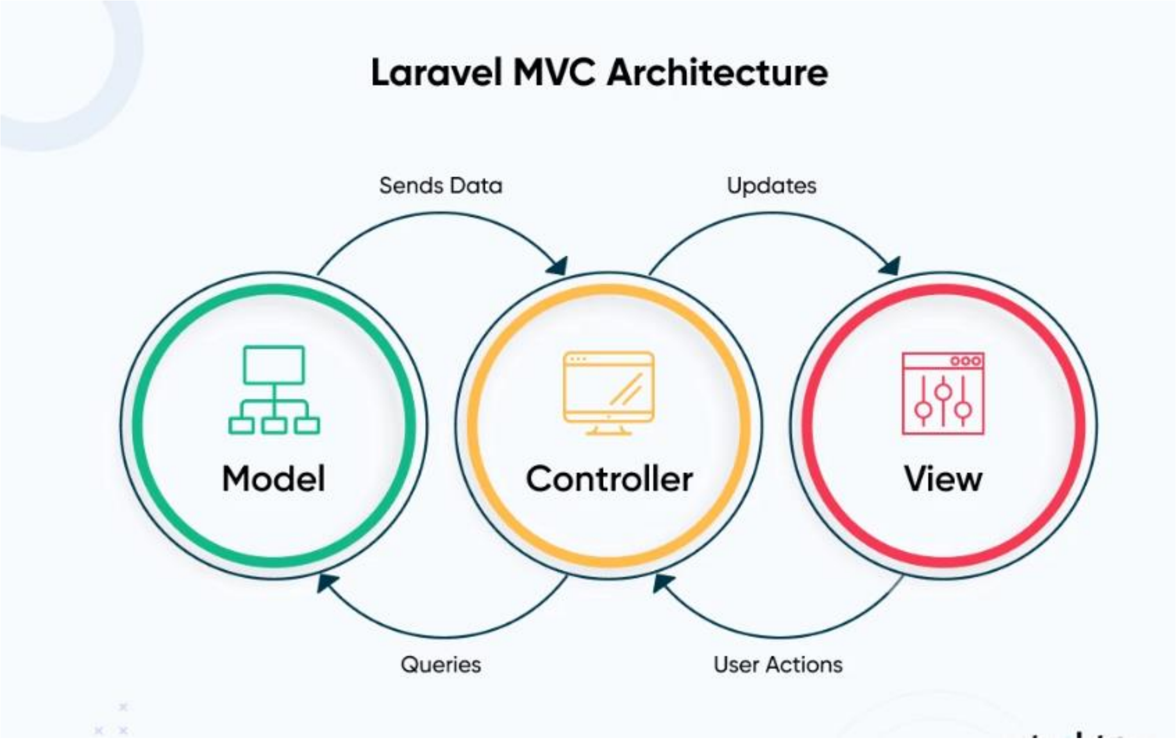
Laravel comes equipped with the Blade template engine, which is simple but very powerful compared to other PHP templating engines. It adds zero overhead to your web app and doesn't restrict you from using plain PHP code in views. Along with some convenient shortcuts for general PHP functions, it also provides features like template inheritance and displaying data that add flexibility to the web development process.

2. Eloquent ORM

Eloquent ORM in Laravel provides web developers with a simple ActiveRecord implementation that makes their interaction with databases easy and less time-consuming. It lets them write database queries using PHP syntax, and they don't need to write or know SQL for updating or modifying databases.

3. Laravel MVC Architecture

Laravel is an MVC-based PHP framework that ensures a tight separation between presentation layers and business logic. MVC stands for Model, View, and Controller. It is a design pattern that separates the model (logic, data handling), view (UI), and controller processes (interface).



laravel mvc architecture

Being based on MVC, the Laravel framework provides many features like high performance, increased security, and scalability.

4. Open Source and Wide Community

Though many PHP frameworks come with a price tag, Laravel is an open-source framework for web developers. Also, it has a powerful community that supports the framework to make it more advanced and flexible.

5. Object-Oriented Libraries

Laravel PHP framework is packed with many built-in object-oriented libraries that are full of amazing features for developers.

Along with these fantastic Laravel framework features, various reasons make organizations ready to go ahead with Laravel development services. These very reasons, or rather the benefits of the Laravel Framework, are listed below.

Why Use Laravel Framework for Web Development?

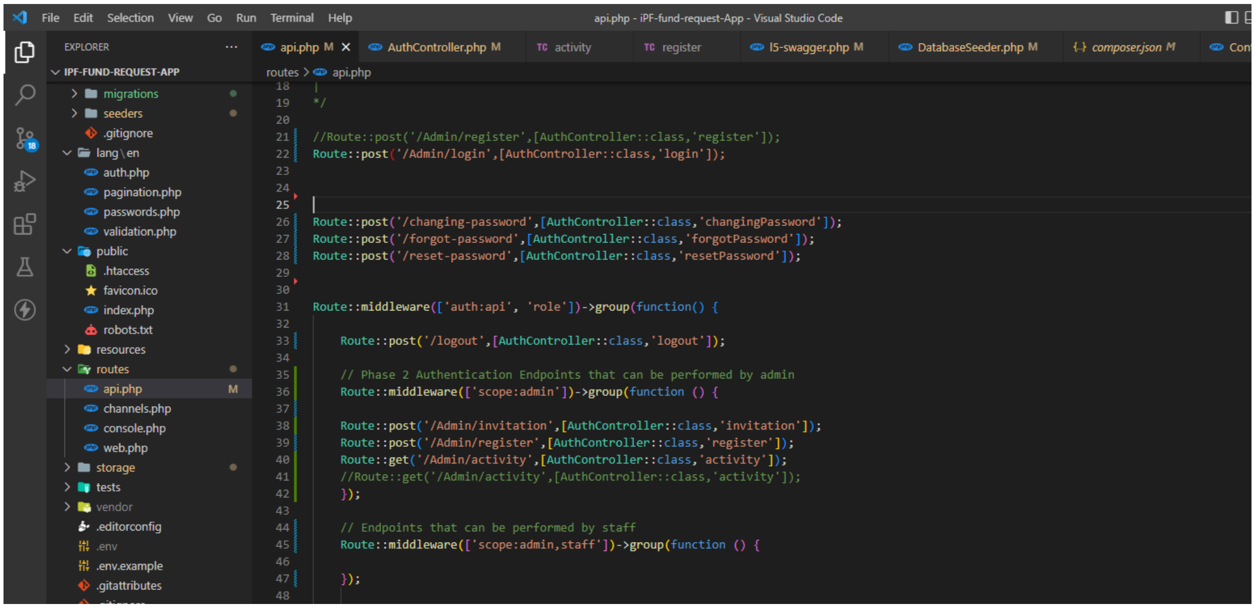
A number of people ask why is Laravel the best framework and so popular among developers? The only answer to it is because they like the peace of mind while developing web apps, and Laravel provides much more than that. No doubt, its ease-of-use, and quality have helped it gain immense popularity but using this popular framework also paves the way for many other benefits.

Issues with other PHP frameworks have been well spotted, resolved, and incredibly well-tested in the development of Laravel. When it comes to testing, note that the PHP Laravel framework has integrated testing into it, making sure your web application is bug-free.

Here are some advantages of using Laravel that will make your web development a seamless and efficient experience:

## 1. Laravel Development Means Faster Time-To-Market

For easing common tasks, the PHP framework Laravel works on a modular basis. It implies that with Laravel, there are a lot of pre-built functions and structures that work on the latest PHP principles to build responsive web applications in a time-efficient manner. Since it is an open-source framework, developers have been in the process of improving these resources since the birth of Laravel in 2011.



```
|
*/

//Route::post('/Admin/register',[AuthController::class,'register']);
Route::post('/Admin/login',[AuthController::class,'login']);



Route::post('/changing-password',[AuthController::class,'changingPassword']);
Route::post('/forgot-password',[AuthController::class,'forgotPassword']);
Route::post('/reset-password',[AuthController::class,'resetPassword']);


Route::middleware(['auth:api', 'role'])->group(function() {

    Route::post('/logout',[AuthController::class,'logout']);

    // Phase 2 Authentication Endpoints that can be performed by admin
    Route::middleware(['scope:admin'])->group(function () {

    Route::post('/Admin/invitation',[AuthController::class,'invitation']);
    Route::post('/Admin/register',[AuthController::class,'register']);
    Route::get('/Admin/activity',[AuthController::class,'activity']);
    //Route::get('/Admin/activity',[AuthController::class,'activity']);
    });

    // Endpoints that can be performed by staff
    Route::middleware(['scope:admin,staff'])->group(function () {

    });

```

structure of laravel framework

This speeds up the development process of web applications, making Laravel quick and intuitive. With the Laravel framework, there is no need to spend long hours and weeks writing individual lines of code. Therefore, it speeds up application delivery while also proving to be economical.

## 2. Better Authentication and Authorization Option

Wikipedia says, “Taylor Otwell created Laravel as an attempt to provide a more advanced alternative to the Codelgniter framework, which did not provide certain features such as built-in support for user authentication and authorization.”

Laravel framework makes it extremely simple and easy to implement a complete authentication system — Login, Registration, and Password Reset. You will be surprised to witness that Laravel does all this with the help of a single command. It also provides a simple way to organize authorization logic and control access to resources.

VOYlegal's Laravel Journey with Net Solutions
One of our clients, VOYlegal, a recruitment firm for lawyers, needed a job portal that could help lawyers and employers seek and post jobs respectively.

Initially, the whole architecture of the website was built using CakePHP. Because of the Laravel framework's various benefits, like a simple way to organize authorization logic and control access to resources, we migrated the VOYlegal website from CakePHP to Laravel.

VOYlegal website

**3. Stay Away from Technical Vulnerabilities with Laravel Framework**
What goes in tandem with the web development process is 'Security Vulnerabilities.' A study by OWASP Foundation describes SQL injection, cross-site request forgery, cross-site scripting, etc. as the most critical web application security vulnerabilities.

The cost and time to fix these vulnerabilities increase exponentially as you progress through the software development lifecycle (SDLC). The following graph indicates the cost increase with the inculcation of security vulnerabilities.

cost to fix vulnerabilities
According to the graph, it is 30x times more expensive to eliminate vulnerabilities during the post-production phase than during the design, requirement identification, and architecture stage.

And when it comes to security, there is none other than Laravel that can secure your web application by protecting it against the most severe security risks: SQL injection, cross-site request forgery, and cross-site scripting.
So, why use Laravel Framework? Because it is super-secure and does not allow any malware

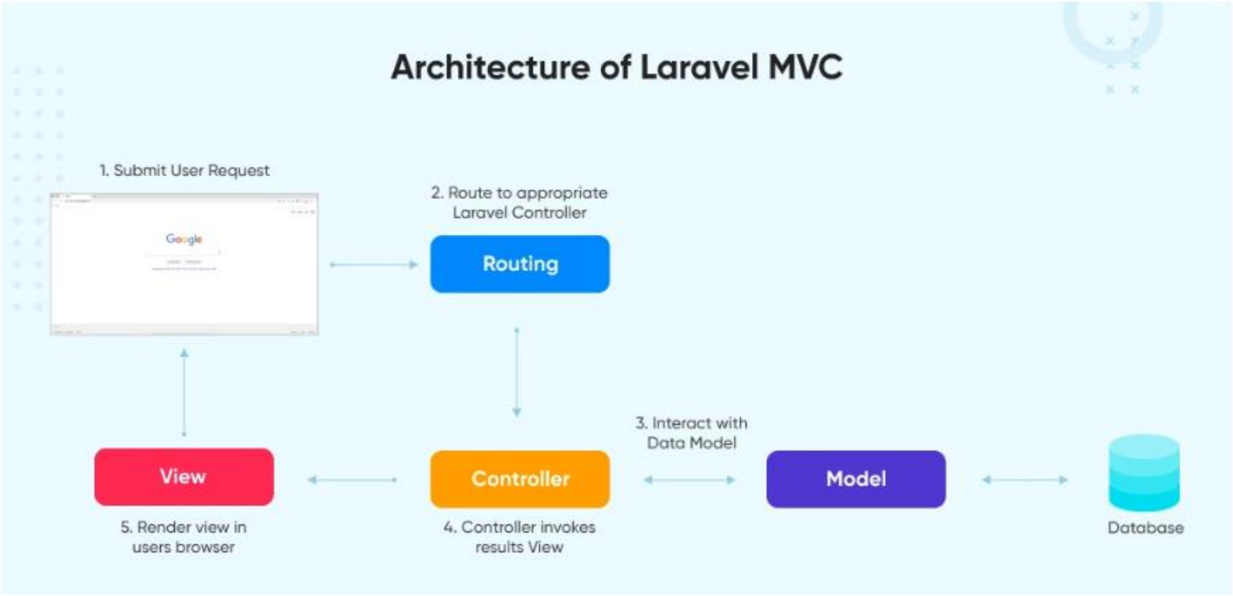
activities or security threats to enter the web app. This simply implies that your PHP web app is completely secure with Laravel.

4. MVC Architecture of Laravel Framework

Laravel architecture is MVC-based, and this is something that makes Laravel the best PHP framework for website development.

MVC architecture comes up with built-in functionalities that developers can use at their best while building your web app. Apart from this, MVC architecture provides better documentation, improved performance, and multiple built-in functionalities compared to other PHP frameworks.

Here's how the Laravel MVC works.


Architecture of Laravel MVC
1. Submit User Request
Google
2. Route to appropriate Laravel Controller
Routing
3. Interact with Data Model
View
Controller
Model
Database
5. Render view in users browser
4. Controller invokes results View

## 5. Automated and Unit Testing Feature

One of the significant advantages of the Laravel Framework is its extraordinary testing support. Without testing a web app thoroughly, you can not ensure that it's bug-free and in accordance with the initial requirements alone.

To make sure that your web app performs well, the Laravel framework provides automation testing support, making it less time-consuming to test an app. It offers simple ways for imitating users' basic behavior (For example, making requests, analyzing outputs, clicking forms) that help you do expressive testing of your app.

The unit testing feature of the PHP Laravel framework lets you test each component or module of your app to ensure that the integrated application performs well when all the modules add up. This results in high-performing web apps with optimized web code.

### 6. Automated Task Execution and Scheduling

Every web application needs a task scheduling mechanism to automate tasks when it is necessary. For example, sending emails to subscribers, notifications to app users, or only cleanup of the database to make web apps faster.

In the past, web developers used to generate a Cron entry for each task they wanted to schedule. However, with Laravel, you can avoid this headache by using its automatic command scheduler. It allows you to quickly and expressively define your command schedule within the Laravel framework itself, and a single Cron entry is required on your server to execute the task.

Besides making your web app high-performing and faster, this feature of the Laravel framework also helps you save on the hosting cost.

### 7. Traffic Handling

Handling application traffic becomes challenging as its popularity grows.

The present situation is like this: the more the traffic a web app fetches, the more are the request numbers it should deal with each second. It means that the web application's hosting will come under an expensive price tag or even the website server will stop functioning with data loss.

You must definitely not want to see yourself in such a situation.

PHP Laravel Framework supports a message queue system for load balancing. The system helps maintain a healthy web server along with effective traffic management. Thus, it keeps a web server healthy – one of the many Laravel benefits.

The Laravel queue service provides a unified API across a variety of different queue backends. Queues allow you to defer the processing of a time-consuming task, such as sending an email, which drastically speeds up web requests to your application.

### Laravel Advantages and Disadvantages

**Advantages**

Easy to get started thanks to great documentation and community support and an intuitive interface

The syntax is easy to understand and use, making it easy even for beginners to use

Built-in libraries

Easy to deploy to major cloud service providers such as AWS

Powerful Blade Templating Engine

Comes with security and authorization out-of-the-box

Robust and scalable

**Disadvantages**

Slower than some frameworks

Less built-in support

Has basic security features, but is still limited by the inherent insecurities of PHP

## LESSON LEARNT IN LARAVEL FRAMEWORK.

### CRUD APP

Before diving into iPF Fund Request project I had to remind my self about core concepts of Laravel by performing CRUD operation.

Below are the procedure on how in carried out this task.

I created crud application for students. so I had to create migration for "student" table using Laravel 9 php artisan command, so first fire bellow command:

```
php artisan make:migration create_products_table --create=products
```

After this command you will find one file in following path "database/migrations" and you have to put bellow code in your migration file for create products table.

```
<?php


use Illuminate\Database\Migrations\Migration;
use Illuminate\Database\Schema\Blueprint;
use Illuminate\Support\Facades\Schema;


class CreateStudentsTable extends Migration
{
    /**
     * Run the migrations.
     *
     * @return void
     */
    public function up()
    {
        Schema::create(students, function (Blueprint $table) {
            $table->id();
            $table->string('name');
            $table->string(email);
            $table->timestamps();
        });
    }

    /**
     * Reverse the migrations.
     *
     * @return void
     */
    public function down()
    {
        Schema::dropIfExists(students);
    }
}
```

Now you have to run this migration by following command:

```
php artisan migrate
```

Here, we need to add resource route for product crud application. so open your "routes/web.php" file and add following route.

routes/web.php

```
use App\Http\Controllers\StudentsController;



Route::resource(students, StudentsController::class);
```

In this step, now we should create new controller as StudentsController. So run bellow command and create new controller. bellow controller for create resource controller.

```
php artisan make:controller StudentsController --resource --model=Student
```

After bellow command you will find new file in this path "app/Http/Controllers/StudentsController.php".

In this controller will create seven methods by default as bellow methods:

1)index()

2)create()

3)store()

4)show()

5)edit()

6)update()

7)destroy()

```
<?php
```

```
namespace App\Http\Controllers;

use App\Models\Product;
use Illuminate\Http\Request;

class StudentsController extends Controller
{
    /**
     * Display a listing of the resource.
     *
     * @return \Illuminate\Http\Response
     */
    public function index()
    {
        $student = Student::latest()->paginate(5);

        return view(student.index',compact(student))
            ->with('i', (request()->input('page', 1) - 1) * 5);
    }

    /**
     * Show the form for creating a new resource.
```

```
 *
 * @return \Illuminate\Http\Response
 */
public function create()
{
    return view('student.create');
}

/**
 * Store a newly created resource in storage.
 *
 * @param  \Illuminate\Http\Request  $request
 * @return \Illuminate\Http\Response
 */
public function store(Request $request)
{
    $request->validate([
        'name' => 'required',
        'email' => 'required',
    ]);

    Product::create($request->all());
    return redirect()->route('student.index')
                    ->with('success','Product created successfully.');
}


/**
 * Display the specified resource.
 *
 * @param  \App\Product  $product
 * @return \Illuminate\Http\Response
 */
public function show(Student $student)
{
    return view('student.show',compact('student'));
}


/**
 * Show the form for editing the specified resource.
 *
 * @param  \App\Product  $product
 * @return \Illuminate\Http\Response
 */
public function edit(Student $student)
{
    return view(student.edit',compact(student));
}


/**
 * Update the specified resource in storage.
 *
 * @param  \Illuminate\Http\Request  $request
 * @param  \App\Product  $product
 * @return \Illuminate\Http\Response
 */
public function update(Request $request, Student $student)
{
    $request->validate([
        'name' => 'required',
        'email' => 'required',
    ]);


    $product->update($request->all());


    return redirect()->route('products.index')
                    ->with('success','Product updated successfully');
}
```

```
    /**
     * Remove the specified resource from storage.
     *
     * @param  \App\Product  $product
     * @return \Illuminate\Http\Response
     */
    public function destroy(Product $product)
    {
        $product->delete();

        return redirect()->route('products.index')
                        ->with('success','Product deleted successfully');
    }
}
```

Ok, so after run bellow command you will find "app/Models/Student.php" and put bellow content in Student.php file:

**app/Models/Student.php**

```
<?php

namespace App\Models;

use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;

```

```
class Student extends Model
{
    use HasFactory;

    protected $fillable = [
        'name', 'email'
    ];
}
```

So let's just create following file and put bellow code.

**resources/views/products/layout.blade.php**

```
<!DOCTYPE html>
<html>
<head>
    <title>Laravel 9 </title>
    <link href="https://cdnjs.cloudflare.com/ajax/libs/twitter-bootstrap/4.0.0-alpha/css/bootstrap.css" rel="stylesheet">
</head>
<body>
```

```
<div class="container">

    @yield('content')

</div>



</body>

</html>
```

**resources/views/products/home.blade.php**

```
@extends('products.layout')



@section('content')

    <div class="row">

        <div class="col-lg-12 margin-tb">

            <div class="pull-left">

            </div>

            <div class="pull-right">

                <a class="btn btn-success" href="{{ route('products.create') }}"> Create New Product</a>

            </div>
        </div>
    </div>


    @if ($message = Session::get('success'))
        <div class="alert alert-success">
            <p>{{ $message }}</p>
        </div>
    @endif


    <table class="table table-bordered">
        <tr>
            <th>No</th>
            <th>Name</th>
            <th>Details</th>
            <th width="280px">Action</th>
        </tr>
        @foreach ($products as $product)
        <tr>
            <td>{{ ++$i }}</td>
            <td>{{ $product->name }}</td>
            <td>{{ $product->detail }}</td>
            <td>
                <form action="{{ route('products.destroy',$product->id) }}" method="POST">
```

```
                    <a class="btn btn-info" href="{{ route('products.show',$product->id) }}">Show</a>


                    <a class="btn btn-primary" href="{{ route('products.edit',$product->id) }}">Edit</a>


                    @csrf

                    @method('DELETE')


                    <button type="submit" class="btn btn-danger">Delete</button>

                </form>

            </td>

        </tr>

        @endforeach

    </table>


    {!! $products->links() !!}


@endsection
```

**resources/views/products/create.blade.php**

```
@extends('products.layout')
```

```
@section('content')
<div class="row">
    <div class="col-lg-12 margin-tb">
        <div class="pull-left">
            <h2>Add New Product</h2>
        </div>
        <div class="pull-right">
            <a class="btn btn-primary" href="{{ route('products.index') }}"> Back</a>
        </div>
    </div>
</div>

@if ($errors->any())
    <div class="alert alert-danger">
        <strong>Whoops!</strong> There were some problems with your input.<br><br>
        <ul>
            @foreach ($errors->all() as $error)
                <li>{{ $error }}</li>
            @endforeach
        </ul>
    </div>
@endif
```

```
<form action="{{ route('products.store') }}" method="POST">
    @csrf

     <div class="row">
        <div class="col-xs-12 col-sm-12 col-md-12">
            <div class="form-group">
                <strong>Name:</strong>
                <input type="text" name="name" class="form-control" placeholder="Name">
            </div>
        </div>
        <div class="col-xs-12 col-sm-12 col-md-12">
            <div class="form-group">
                <strong>Detail:</strong>
                <textarea class="form-control" style="height:150px" name="detail" placeholder="Detail"></textarea>
            </div>
        </div>
        <div class="col-xs-12 col-sm-12 col-md-12 text-center">
                <button type="submit" class="btn btn-primary">Submit</button>
        </div>
    </div>

</form>
```

```
@endsection
```

**resources/views/products/edit.blade.php**

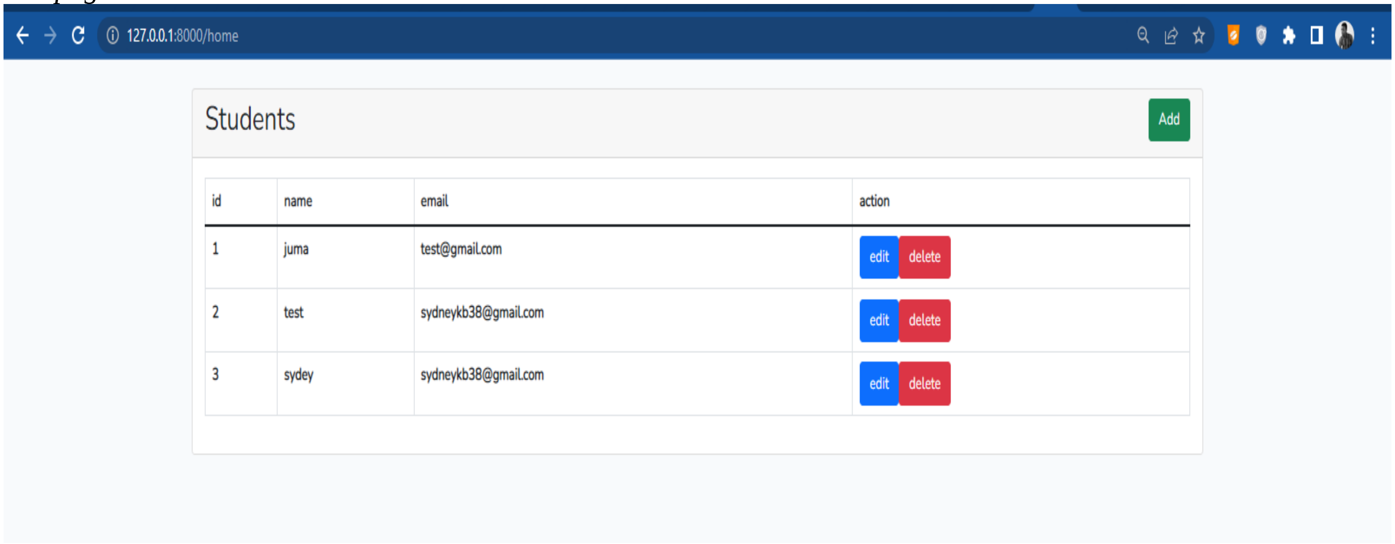
```
@extends('products.layout')

@section('content')
    <div class="row">
        <div class="col-lg-12 margin-tb">
            <div class="pull-left">
                <h2>Edit Product</h2>
            </div>
            <div class="pull-right">
                <a class="btn btn-primary" href="{{ route('products.index') }}"> Back</a>
            </div>
        </div>
    </div>

    @if ($errors->any())
        <div class="alert alert-danger">
            <strong>Whoops!</strong> There were some problems with your input.<br><br>
            <ul>
                @foreach ($errors->all() as $error)
                    <li>{{ $error }}</li>
                @endforeach

            </ul>

        </div>

    @endif



    <form action="{{ route('products.update',$product->id) }}" method="POST">

        @csrf

        @method('PUT')



         <div class="row">

            <div class="col-xs-12 col-sm-12 col-md-12">

                <div class="form-group">

                    <strong>Name:</strong>

                    <input type="text" name="name" value="{{ $product->name }}" class="form-control" placeholder="Name">

                </div>

            </div>

            <div class="col-xs-12 col-sm-12 col-md-12">

                <div class="form-group">

                    <strong>Detail:</strong>

                    <textarea class="form-control" style="height:150px" name="detail" placeholder="Detail">{{ $product->detail }}</textarea>

                </div>

            </div>
            <div class="col-xs-12 col-sm-12 col-md-12 text-center">
              <button type="submit" class="btn btn-primary">Submit</button>
            </div>
        </div>

    </form>
@endsection
```

**resources/views/products/show.blade.php**

```
@extends('products.layout')

@section('content')
    <div class="row">
        <div class="col-lg-12 margin-tb">
            <div class="pull-left">
                <h2> Show Product</h2>
            </div>
            <div class="pull-right">
                <a class="btn btn-primary" href="{{ route('products.index') }}"> Back</a>
            </div>
        </div>
    </div>

    <div class="row">
```

```
        <div class="col-xs-12 col-sm-12 col-md-12">

            <div class="form-group">

                <strong>Name:</strong>

                {{ $product->name }}

            </div>

        </div>

        <div class="col-xs-12 col-sm-12 col-md-12">

            <div class="form-group">

                <strong>Details:</strong>

                {{ $product->detail }}

            </div>

        </div>

    </div>

@endsection
```

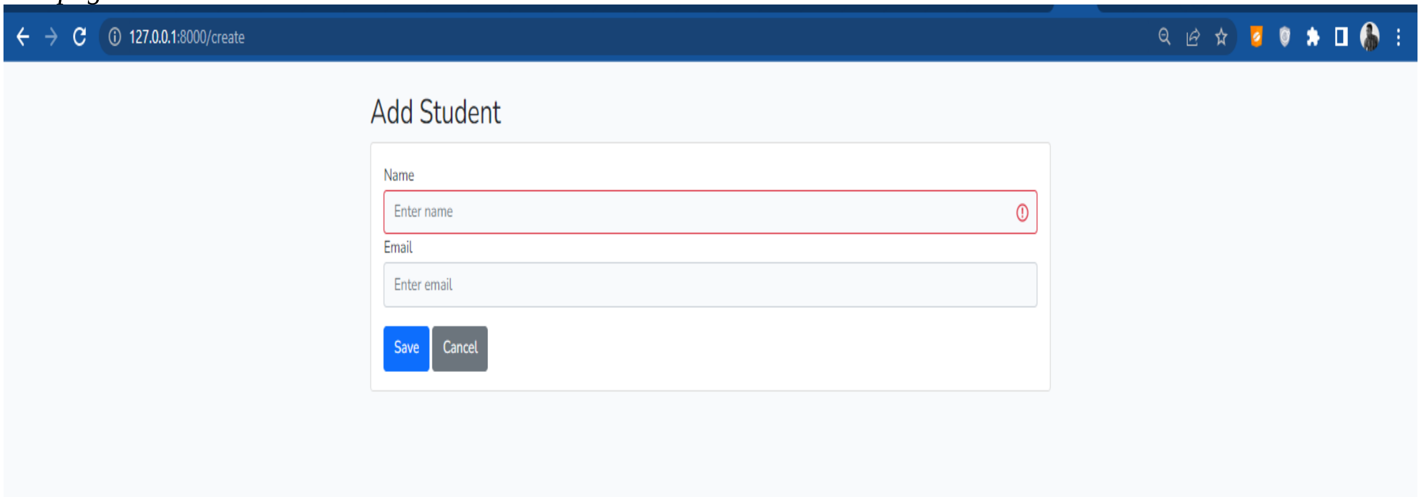
*List page:*



Students

| id | name | email | action |
|---|---|---|---|
| 1 | juma | test@gmail.com | edit delete |
| 2 | test | sydneykb38@gmail.com | edit delete |
| 3 | sydey | sydneykb38@gmail.com | edit delete |

*Add page:*



Add Student

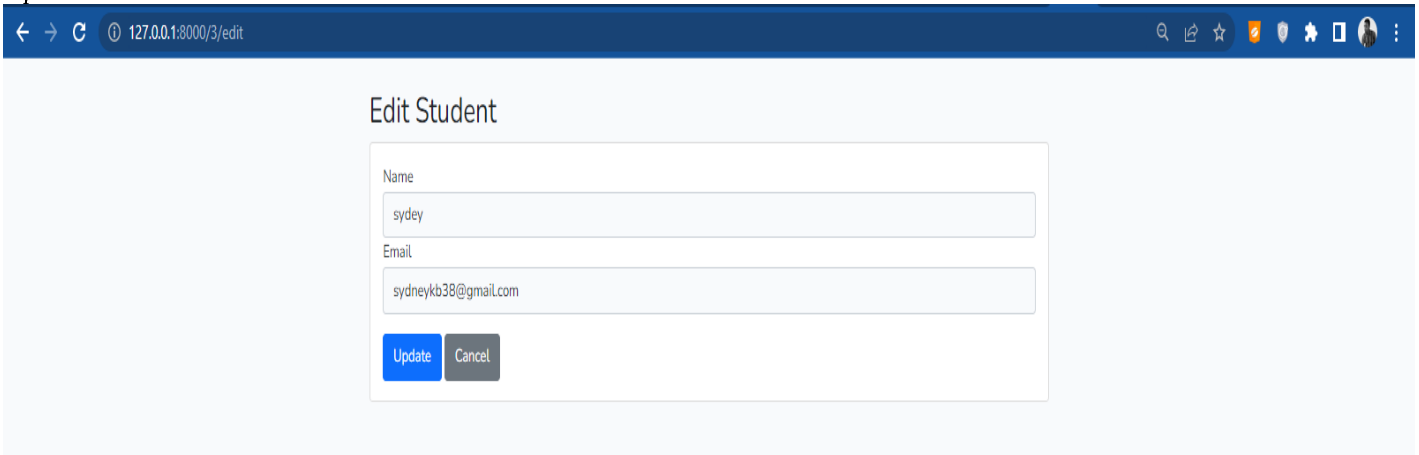
Name

Enter name

Email

Enter email

*Update:*



Edit Student

Name: sydey

Email: sydneykb38@gmail.com

# CHAPER FOUR

## iPF FUND REQUEST PROJECT.

Project review

The Fund Request App deals with funds requisition and also monthly budgeting through a system, the system includes three users with the following roles: admin, finance manager and Staff.

*Role 1:*

Admin will deal with adding new users to the system which may include staff, finance manager and others admins ie

- Manage Roles and permissions
- Manage Users

*Role 2:*

Staff will be able to send requests for the required funds and review their request as well to see if the requests are accepted or rejected.

*Role 3:*

Finance manager deals with handling requests by accepting or rejecting the request well as planning the monthly budget.

Review tools

Tools that will be used are Laravel, Mysql, Postman or Visual, Heroku.

**Laravel** is a PHP framework that attempts to take the pain out of development by easing common tasks used in the majority of web projects, such as authentication, routing, sessions, and caching. Laravel aims to make the development process a pleasing one for the developer without sacrificing application functionality.

**Mysql** database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.

**Heroku** is a cloud platform as a service supporting several programming languages. Is good for beginner and low cost project and its weakness hard to use for non-web services that don't use HTTP

## REQUIREMEMNTS OF IPF FUND REQUEST APP

1. Admin:

- Manage Roles and permissions
- Manage Users

2. Staff/Fund requestor:

- As a fund requester, I want to be able to request funds whenever I want for official use.

Acceptance Criteria:

- Fund requester should be able to state the fund reason (Business activity)
- Fund requester should be able to state the project name for the fund request
- Fund requester should be able to enter the amount required.
- Fund requester should be able to edit if the request has not been accepted
- Fund requester should be able to submit the request to the finance manager
- If there is any request that needed receipt and the receipt is not uploaded, requester has to ask for exemption of receipt or upload previous receipt

- On asking for exemption a requester has to state a reason on why he/she can't upload receipt

3. Finance Manager:

A: As a finance manager I want to be able to view the fund request made so that I can be able to approve it.

Acceptance Criteria:

- Should get the fund request after the submission
- should be able to accept or reject the request
- should be able to send back the request to the fund requester if he rejects it for a reason
- Finance manager can see a list of all requests with no receipts and reasons for that state, then he can choose to allow exemption

3.1 As a finance manager, I want to be able to create a monthly budget so that I can set a spending limit on items for a particular month

Acceptance Criteria:

- A budget is specific to a month
- Finance manager updates amounts one by one
- In case there is a carry over amount from the previous month, amount carried over will be displayed as part of details to show how much is carried over and a finance manager will fill in the amount for this month
- A budget amount in this case has to be greater than the carry over amount
- A budget for the month can be created any prior time but can only be in effect on the first of the month
- In case a budget is not created by the 1st of the month, there is not any operation in the platform that can be done apart from a create budget screen
- Finance manager is able to see a list of previous budgets and ability to generate report of that particular month

3.2: As a finance manager, I want to be able to upload budgeting items through spreadsheets so that I can specify budgeting items.

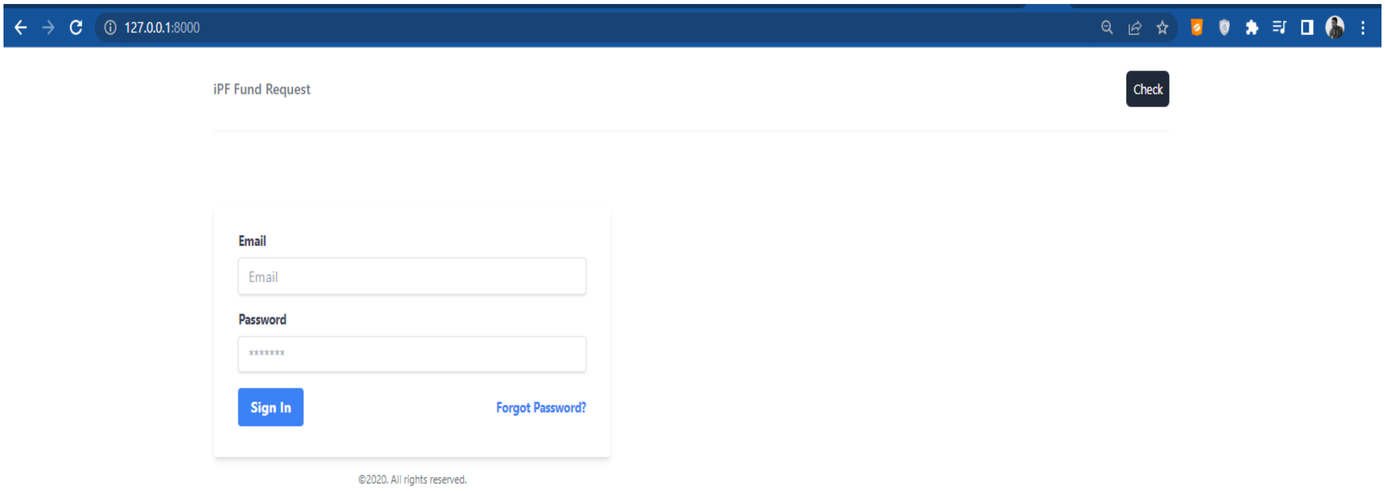
Acceptance Criteria:

- Finance managers can upload budgeting items through spreadsheets. On specific month
- Finance managers can add new budgeting items one at a time.
- Finance managers can CRUD budgeting items.

## LOGIN PAGE OF IPF FUND REQUEST APP

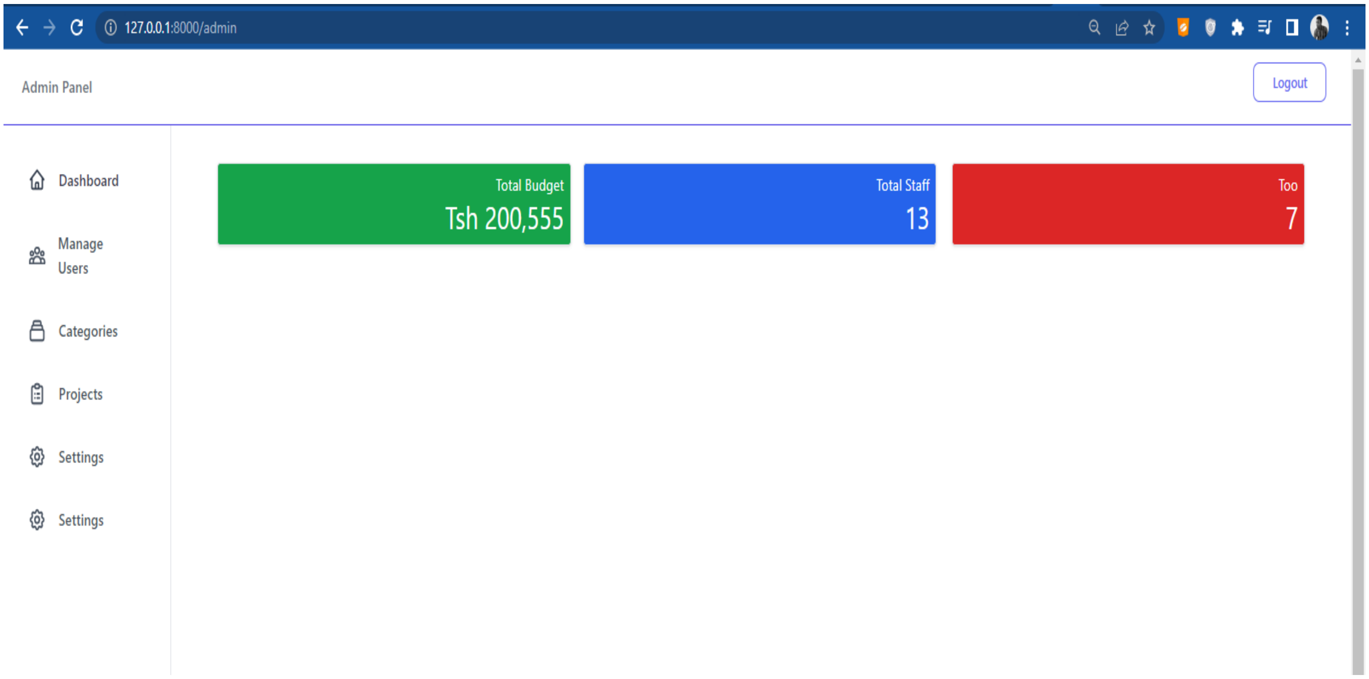
Login Page is very common among any type of secured applications and its widely used on the internet for authenticating the user before presenting the secured pages of the web applications. For example to use Facebook you have to get authenticated by the Facebook before they give you access to their platform. The user authentication is done through a special web page called Login Page. The Login page asks you to enter your credentials which is then validated by the application and after successful validation you are presented with the secured part of the application.

This login page is used by all users i.e. Admin, staff and finance manager.



## ADMIN PAGE:

As specified above admin can manage all users well as managing categories and list of projects to be funded

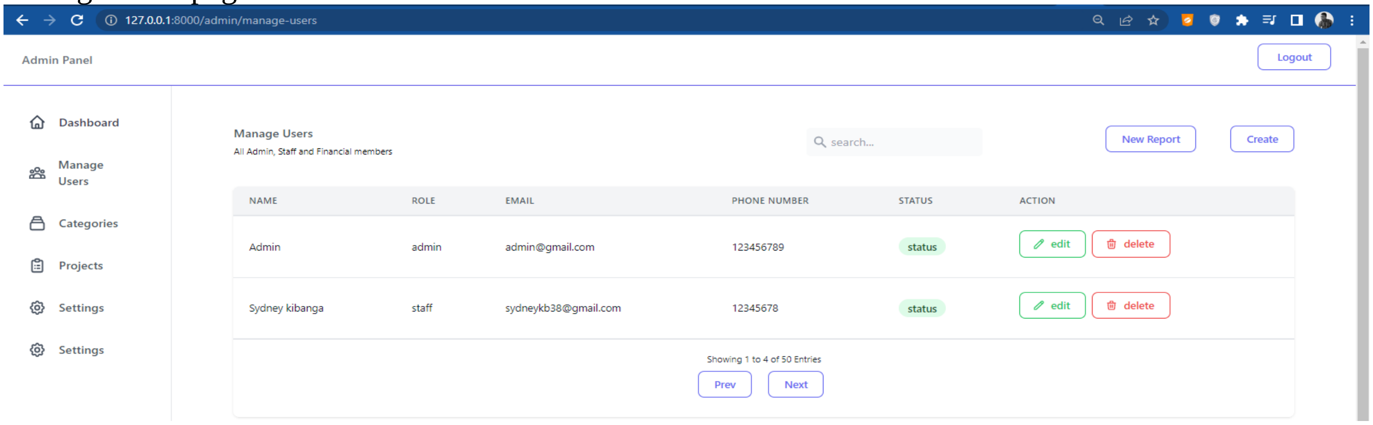


Total Budget Tsh 200,555

Total Staff 13

Too 7

Manage-users page



127.0.0.1:8000/admin/manage-users

Admin Panel

Logout

- Dashboard
- Manage Users
- Categories
- Projects
- Settings
- Settings

Manage Users

All Admin, Staff and Financial members

search...

New Report

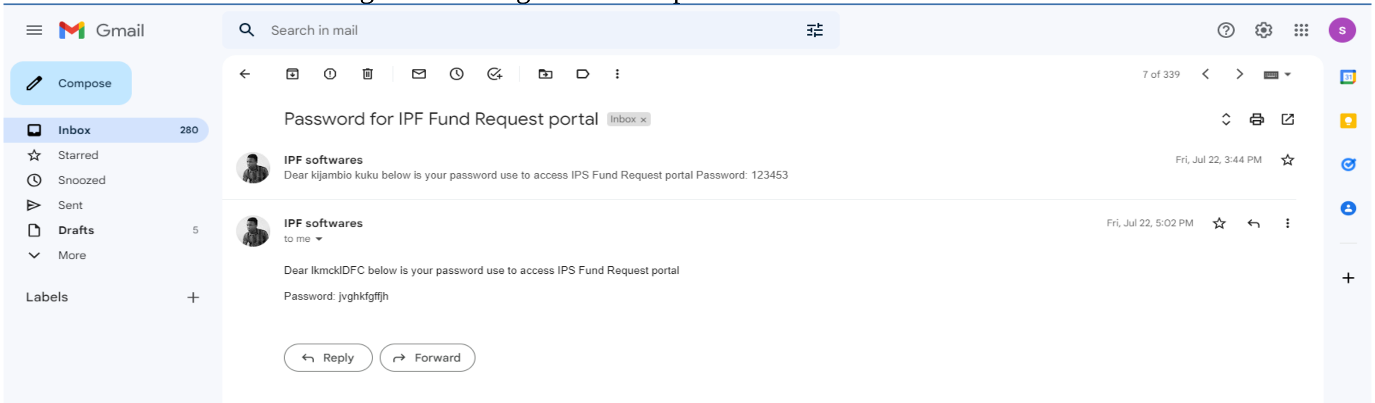
Create

| NAME | ROLE | EMAIL | PHONE NUMBER | STATUS | ACTION |
|---|---|---|---|---|---|
| Admin | admin | admin@gmail.com | 123456789 | status | edit delete |
| Sydney kibanga | staff | sydneykb38@gmail.com | 12345678 | status | edit delete |

Showing 1 to 4 of 50 Entries

Prev Next

Also in order for the user to login after being created the password were sent to their emails.



Password for IPF Fund Request portal Inbox ×

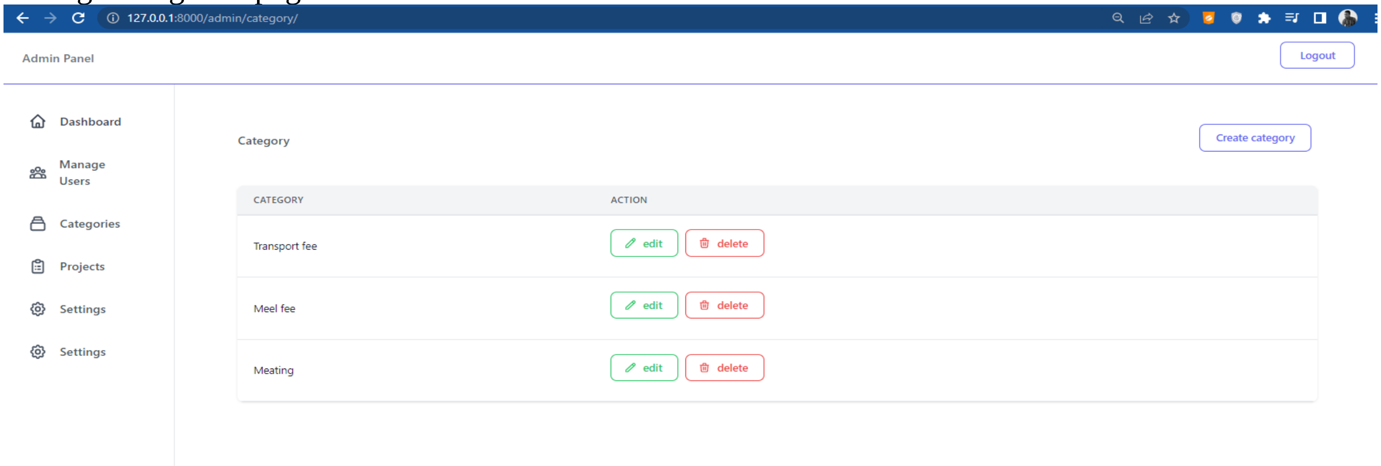
IPF softwares
Dear kijambio kuku below is your password use to access IPS Fund Request portal Password: 123453
Fri, Jul 22, 3:44 PM

IPF softwares
to me
Fri, Jul 22, 5:02 PM

Dear IkmckIDFC below is your password use to access IPS Fund Request portal

Password: jvghkfgffjh

Manage-categories page



127.0.0.1:8000/admin/category/

Admin Panel

Logout

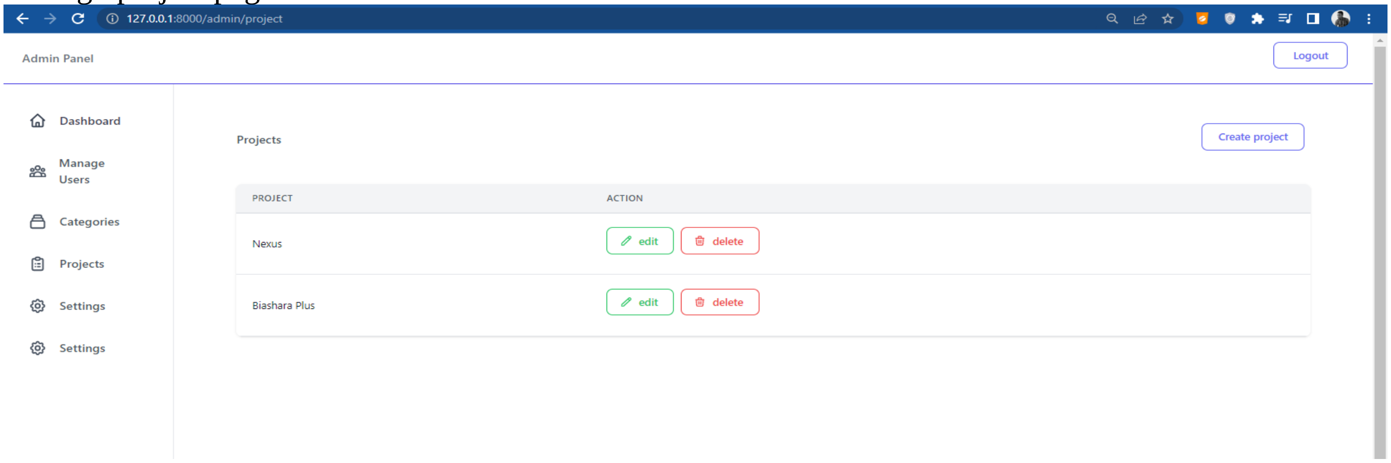
- Dashboard
- Manage Users
- Categories
- Projects
- Settings
- Settings

Category

Create category

| CATEGORY | ACTION |
|---|---|
| Transport fee | edit delete |
| Meel fee | edit delete |
| Meating | edit delete |

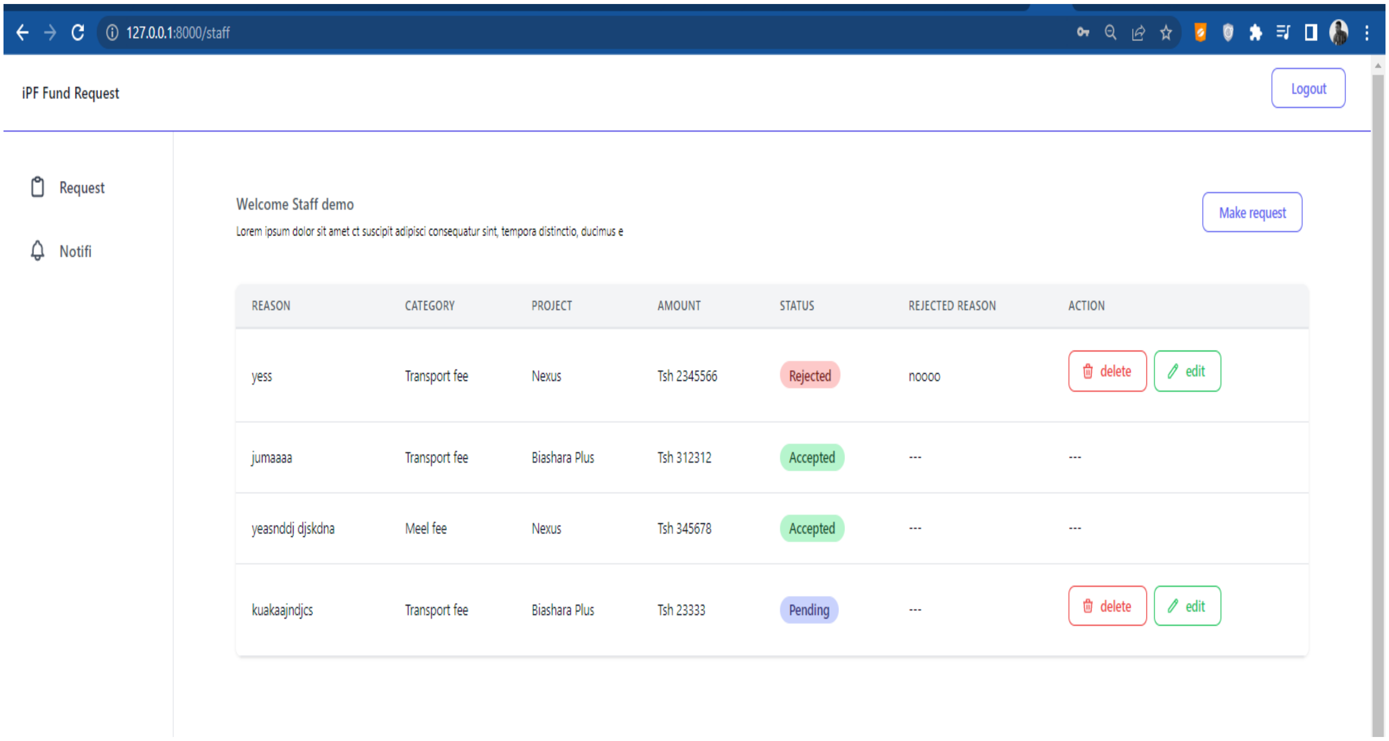
Manage-project page



Projects

| PROJECT | ACTION |
|---|---|
| Nexus | edit delete |
| Biashara Plus | edit delete |

## STAFF PAGE.



Welcome Staff demo

Lorem ipsum dolor sit amet ct suscipit adipisci consequatur sint, tempora distinctio, ducimus e

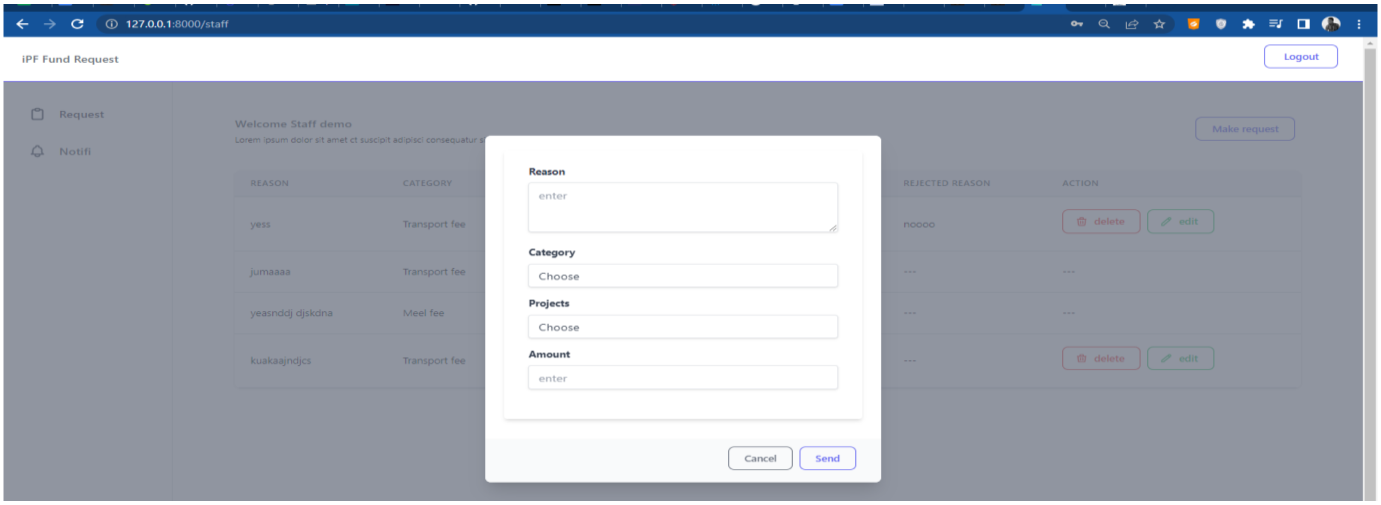
| REASON | CATEGORY | PROJECT | AMOUNT | STATUS | REJECTED REASON | ACTION |
|---|---|---|---|---|---|---|
| yess | Transport fee | Nexus | Tsh 2345566 | Rejected | noooo | delete edit |
| jumaaaa | Transport fee | Biashara Plus | Tsh 312312 | Accepted | --- | --- |
| yeasnddj djskdna | Meel fee | Nexus | Tsh 345678 | Accepted | --- | --- |
| kuakaajndjcs | Transport fee | Biashara Plus | Tsh 23333 | Pending | --- | delete edit |

STAFF REQUEST MODAL(FORM)

A model that a staff or fund requester can fill a form and submit to the finance manager. The fields are as follows:-

- Reason
- Category eg Meel fee, Transport fee and Meeting
- Project to be funded
- Amount needed.

After a successful submission, staff has to wait for the response from the finance manager.

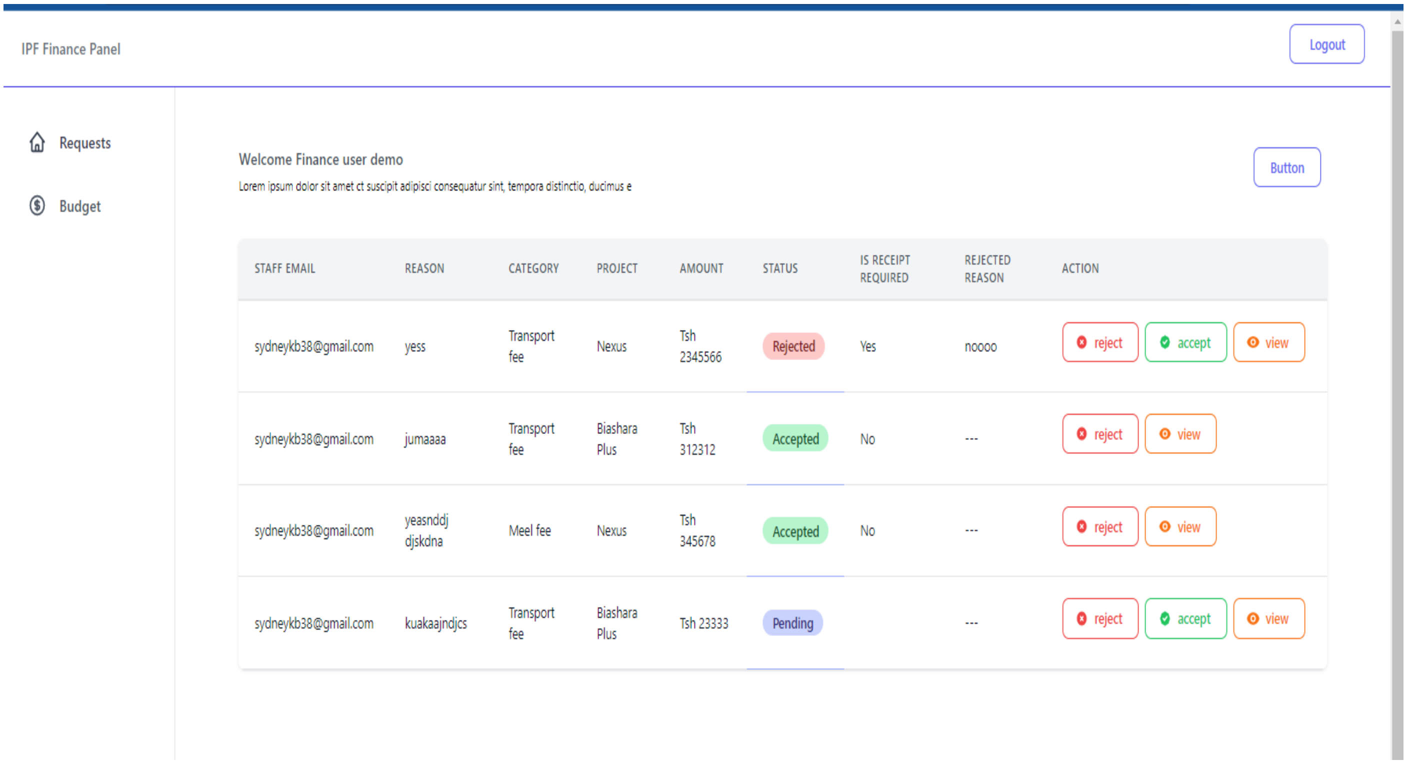


Welcome Staff demo
Lorem ipsum dolor sit amet ct suscipit adipisci consequatur s

| REASON | CATEGORY | REJECTED REASON | ACTION |
|---|---|---|---|
| yess | Transport fee | noooo | delete edit |
| jumaaaa | Transport fee | --- | --- |
| yeasnddj djskdna | Meel fee | --- | --- |
| kuakaajndjcs | Transport fee | --- | delete edit |

Reason: enter
Category: Choose
Projects: Choose
Amount: enter

# FINANCE MANAGER

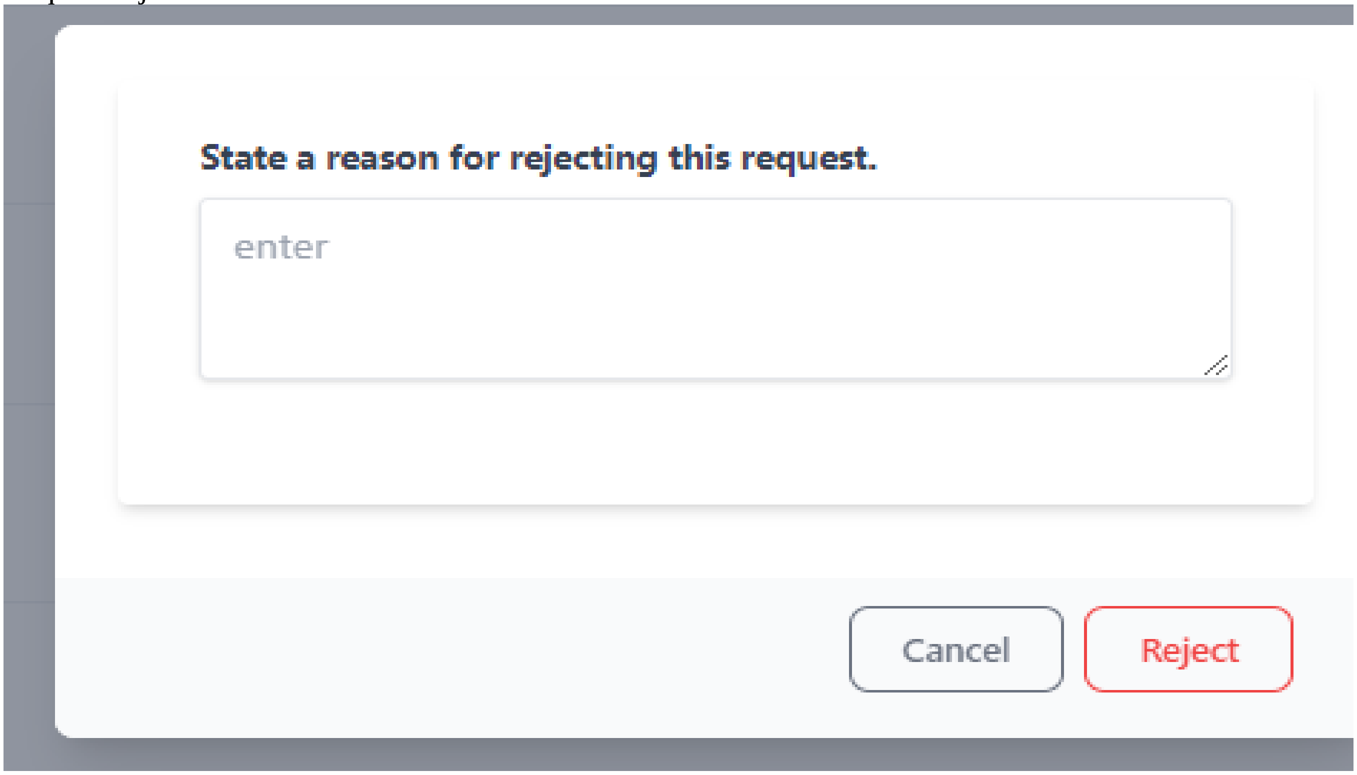


Welcome Finance user demo

Lorem ipsum dolor sit amet ct suscipit adipisci consequatur sint, tempora distinctio, ducimus e

| STAFF EMAIL | REASON | CATEGORY | PROJECT | AMOUNT | STATUS | IS RECEIPT REQUIRED | REJECTED REASON | ACTION |
|---|---|---|---|---|---|---|---|---|
| sydneykb38@gmail.com | yess | Transport fee | Nexus | Tsh 2345566 | Rejected | Yes | noooo | reject<br>accept<br>view |
| sydneykb38@gmail.com | jumaaaa | Transport fee | Biashara Plus | Tsh 312312 | Accepted | No | --- | reject<br>view |
| sydneykb38@gmail.com | yeasnddj djskdna | Meel fee | Nexus | Tsh 345678 | Accepted | No | --- | reject<br>view |
| sydneykb38@gmail.com | kuakaajndjcs | Transport fee | Biashara Plus | Tsh 23333 | Pending | | --- | reject<br>accept<br>view |

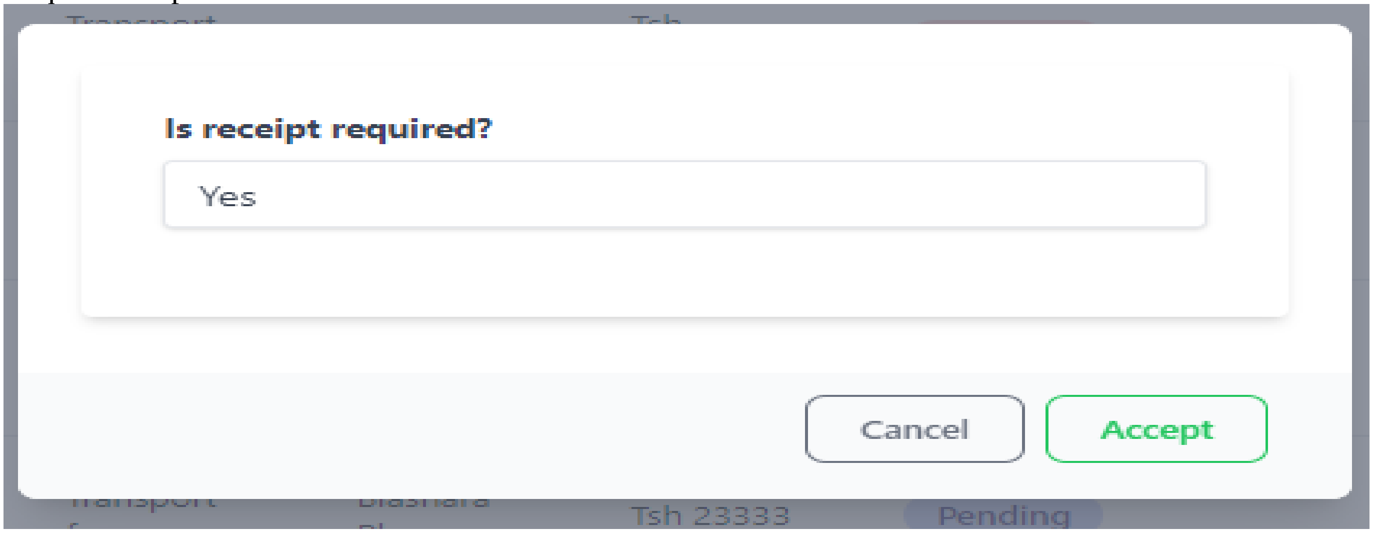
Request rejection:



State a reason for rejecting this request.

enter

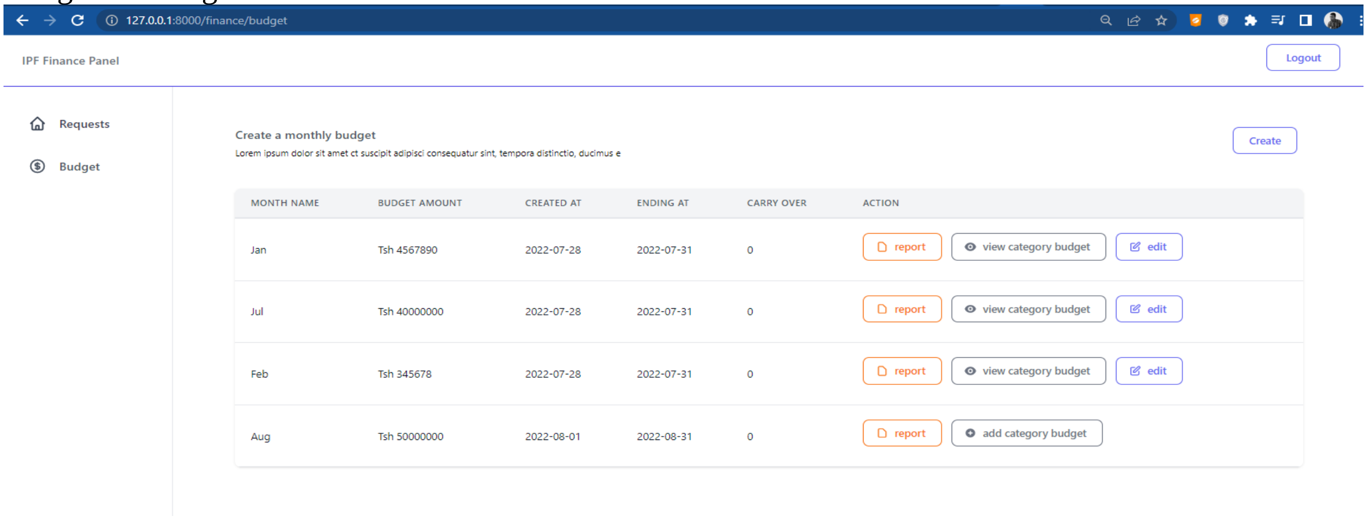
Request accept:



Is receipt required?

Yes

## Budget Planning:

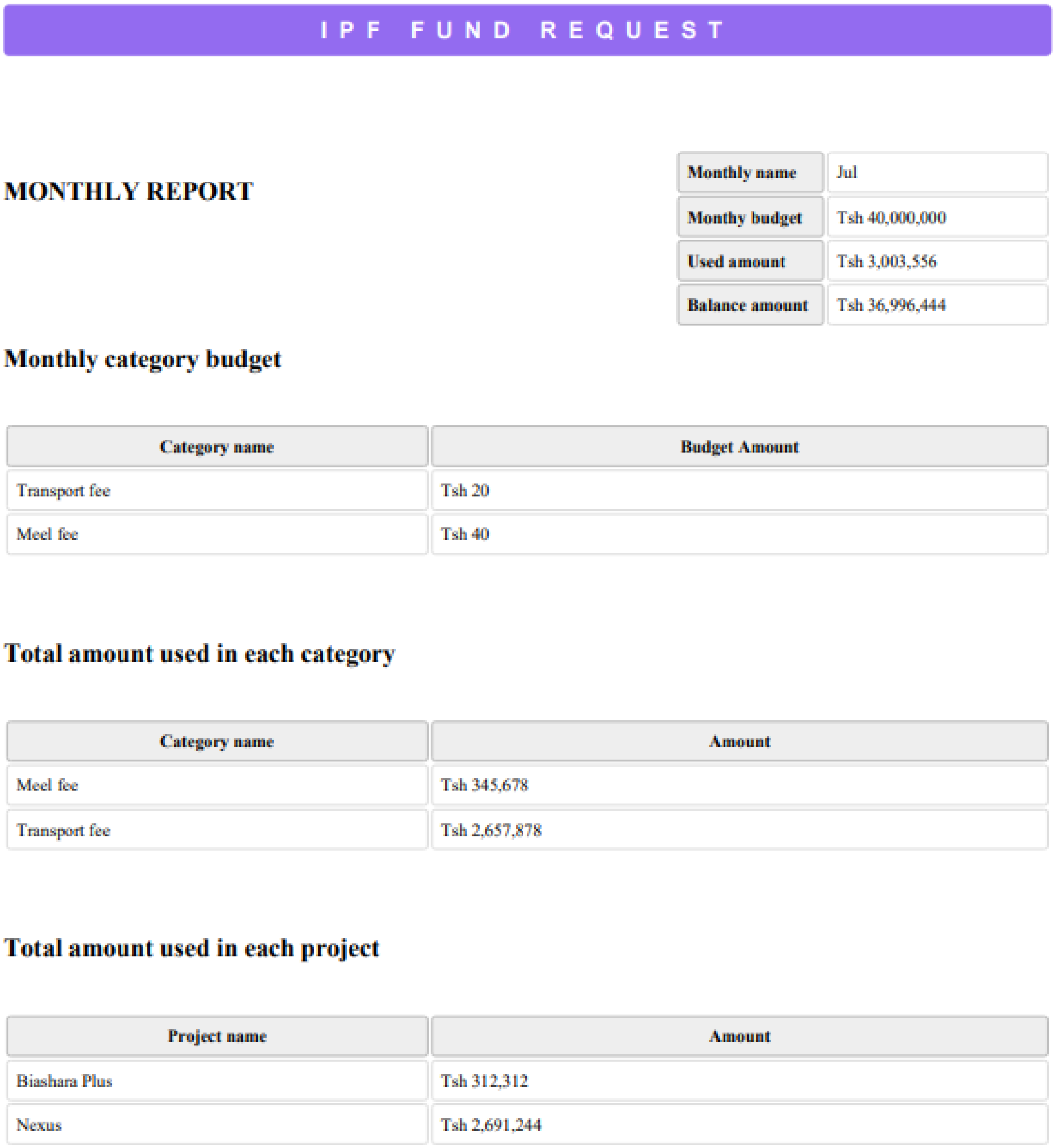


Create a monthly budget

Lorem ipsum dolor sit amet ct suscipit adipisci consequatur sint, tempora distinctio, ducimus e

| MONTH NAME | BUDGET AMOUNT | CREATED AT | ENDING AT | CARRY OVER | ACTION |
|---|---|---|---|---|---|
| Jan | Tsh 4567890 | 2022-07-28 | 2022-07-31 | 0 | report<br>view category budget<br>edit |
| Jul | Tsh 40000000 | 2022-07-28 | 2022-07-31 | 0 | report<br>view category budget<br>edit |
| Feb | Tsh 345678 | 2022-07-28 | 2022-07-31 | 0 | report<br>view category budget<br>edit |
| Aug | Tsh 50000000 | 2022-08-01 | 2022-08-31 | 0 | report<br>add category budget |

## Report generation:



IPF FUND REQUEST

## MONTHLY REPORT

| | |
|---|---|
| **Monthly name** | Jul |
| **Monthy budget** | Tsh 40,000,000 |
| **Used amount** | Tsh 3,003,556 |
| **Balance amount** | Tsh 36,996,444 |

### Monthly category budget

| Category name | Budget Amount |
|---|---|
| Transport fee | Tsh 20 |
| Meel fee | Tsh 40 |

### Total amount used in each category

| Category name | Amount |
|---|---|
| Meel fee | Tsh 345,678 |
| Transport fee | Tsh 2,657,878 |

### Total amount used in each project

| Project name | Amount |
|---|---|
| Biashara Plus | Tsh 312,312 |
| Nexus | Tsh 2,691,244 |

# CHAPTER FOUR

## RECOMMENDATIONS

Information Technology is a hands on course. It requires practical hands on experience for those yet “raw” students without what employers refer to as “Work Experience”. For a course of this kind, any institution offering it would love to see its students get acceptedin a company that reflects the use of modern technology.

The issue is not just getting an internship place. The biggest issue lies within the question“is the company, organization or institution capable of giving the much needed technological, hands on and employee experience to the intern?” Whether or not, this question is very valid in the field of Information Technology.

To many students, it doesn’t matter. What many need is the approval of the final internship report, and they think all is well with them. No! That isn’t the case with technology and those who want to be successful tech gurus.

The few that exist are not always enough to accommodate the huge number of internship seekers. So, as a result, internship requisitions should always be done earlier so as followups are made and one can just land to the organization that gives that handy experience.

## CONCLUSION

As if the time span for the internship should be extended to a further three months, I must confess that the time I have spent interning with iPF Softwares resulted in one of the best learning and working experiences in the field of Information Technology in my life. Not only did I gain practical skills but also had the opportunity to meet many experienced and fantastic people both in and out of the field of Information and Communications Technology.

The atmosphere and staff at the iPF Softwares office were always welcoming, making me feel right at home. Additionally, I felt like I was contributing to the company by assisting the non-technical staff in their day to day work logs as well as doing the daily tasks of my trainers as part of the training. The ready-to-help staff in the Technology department have always been by my side, letting me have the opportunity to learn and interact at any time during the training.

Finally, the internship was fun and therefore I would encourage iPF Softwares to continue giving students this opportunity, not only as a requirement from their college for the award of a degree, but also as part of a strong corporate social responsibility plan towards strengthening and building the skills of young people in the institutions and societies around the country, making sure they are presented with opportunities that shape their future for whatever carrier they intend to fore take.

## REFFERENCES

1. TRAINEES DIARY

# APPENDICES

List of screen shots of activities carried out