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Abstract

[Draw your reader in with an engaging abstract. It is typically a short summary of the document.   
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Digitus trial

Software Design Document

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# Introduction

## Purpose

The purpose of this document is to present a detailed description of the designs of the Digitus Trial Application

# Design Considerations

## Assumptions

Only activated users can successfully authorized into system. Also only admin roles can execute system reports.

## System Environment

### Using Technologies and Tools

Database: MongoDB over Docker Container

Programming Language: C#

Platform: .Net Core 3.1

Authentication Method: Username / Password

Authorization Method: Bareer Token

Architecture: RESTFUL Api

# Architecture

## Diagrams

### Register User Diagram

A close up of a map

Description automatically generated

### Verify User

A close up of a piece of paper

Description automatically generated

### Authentication Diagram

A screenshot of a cell phone

Description automatically generated

### Forget Password Diagram

A screenshot of a cell phone

Description automatically generated

# Test Cases

## Scenarios

Almost all test scenarios covered by unit tests. Covered test scenarios described below.

## Register User Tests

### User Successfully Registered

If everything goes good and registration process completed without any error, application will return registration success status

### User Registration Failed Due Argument Validation

If any required model property or field passed with null or empty value, system will throwed Argument Null Exception

### User Registration Failed Due Existing Email Validation

If passed email already registered to database, application will return registration failed status and message

### User Registration Failed Due Existing Username Validation

If passed username already registered to database, application will return registration failed status and message

### User Registration Failed Due System Error

If any error occurred during user registration process, application will return registration fail status with a message

## Authentication User Tests

### Authentication Success

If passed username and password is valid and also user status is active, then application create a token for further API calls and return it with user account information and authentication success status.

### Authentication Failed Due Password Null Validation

If null password argument passed to API method, application will throw Argument Null Exception.

### Authentication Failed Due Username Null Validation

If null username passed to API method, application will throw Argument Null Exception

### Authentication Failed Due Account Not Activated

If passed username and password is valid but user is still pending activation, then application return authorization failed status and message.

### Authentication Failed Due Invalid Credentials

If passed username and password is invalid then, application will return authorization failed status and message.

## Verify User Tests

### Verify User Success

If passed verify code is valid then, API will return verify success status and message.

### Verify User Failed Due Already Verified User

If passed verify code is valid but account already verified then, API will return verify fail status and message.

### Verify User Failed Due Invalid Verification Code

If passed verify code is invalid then, API will return verify fail status and message.

## Forget Password Tests

### Forget Password Success

If passed email address is valid then, new password generated and sent it over email and API will return success status and message.

### Forget Password Failed Due Invalid Argument

If null or empty email value passed then, API will throw Argument Null Exception.

### Forget Password Failed Due Account Not Found

If passed email is not matched with existing records then, API will return Forget Password Fail Status and message