Experiment Project Documentation

Introduction

This document captures the technical details related to the experiment development.

Project

Domain Name : Soil Mechanics and Foundation Engineering
Lab Name : Soil Mechanics Lab
Experiment Name : Permeability Experiment

Permeability is defined as the property of porous material which permits the passage or seepage of water through its interconnected voids. The coefficient of permeability is finding out following method.

a) Laboratory method:

i. Variable head test.

ii. Constant head test.

The derivation of the coefficient of permeability is based on the assumption of the validity of the Darcy's law to the flow of water in soil. The term coefficient of permeability implies the velocity of flow of water through the soil under unit hydraulic gradient, and consequently has the same units as that of velocity

Purpose of the project

The purpose of the project is to convert the **Permeability** experiment simulation from **Java** to **Javascript**.

Project Developers Details

S.NO	Names	Year of Study	Role	Email-ID	github handles

1.	B N V Visweswar Abhay	3	Intern	bandaabhay@gmail.com	AbhayBanda

Technologies and Libraries

Technologies :

1. HTML
2. CSS
3. Javascript

Libraries :

Nil

Development Environment

OS : <<Windows, LINUX so on...>>
Bandwidth: <<100Mbps>>

Documents :

S.NO	Link to Document	Role
1.	Procedure	This document captures the instructions to run the simulations
2.	Test Cases	This document captures the functional test cases of the experiment simulation
3.	Code Documentation	This document captures the details related to code

Process Followed to convert the experiment

1. Understand the assigned experiment Java simulation
2. Understanding the experiment concept
3. Re-implement the same in javascript

Value Added by our Project

1. It would be beneficial for engineering students
2. Highly beneficial for tier 2 and tier 3 college students who can use this to learn and understand the concept of Permeability of Soil .

Risks and Challenges

1.Creating the Water droplets is a major challenge.

Issues :

1.Isuue with Responsiveness of the page.

2.Issue with screen fit of the experiment.