**Experiment Project Documentation**

**Introduction**

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

**Project**

**Domain Name :** Civil Engineering

**Lab Name :** Hydraulics and Fluid Mechanics

**Experiment Name :** Weirs

A weir is an opening in the side walls of a tank. It is same as an orifice without having an outer boundary. If the head is reduced the liquid flows with its level below the top of the orifice. The wall above the liquid level is superfluous and can be removal. The difference between a large orifice and weir is that liquid flows through the orifice while it flows over the weir. The flow of liquid coming out of orifice is called jet while that comes through the weir is called ‘nape, sheet or vein’. There is no difference between a notch and a weir, except that notch is a small structure and has a sharp edges. Weir, on the other hand, is generally is an over flow structure. With broad crested, built across an open channel. It is built across a river in order to raise water on the upstream and to allow excess water to flow over its entire length to the downstream side. Weirs are used for measuring the rate of flow of water in rivers or stream.

**Purpose of the project**

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

**Project Developers Details**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.NO** | **Names** | **Year of Study** | **Role** | **Email-ID** | **github handles** |
| 1. | Cheruku Priyanka | Btech 4th | Developer | Priyankacheruku2016@gmail.com | priyankacheruku |

**Technologies and Libraries**

**Technologies :**

1. HTML
2. CSS
3. Javascript

**Libraries :**

1. **Canvasjs**
2. **Bootstrap**

**Development Environment**

**OS :**Ubuntu 18.0

**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(which is incomplete)
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 perception learning.

**Risks and Challenges**

learning a canvasjs and understanding the theory of experiment

**Issues :**

Adjusting of apex is not implemented.