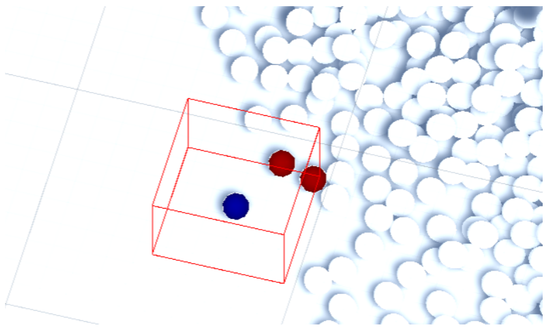
# AIM

The POF project primary aim is researching particle-based fluid simulation and improving the performance of the particle-based fluid simulation.



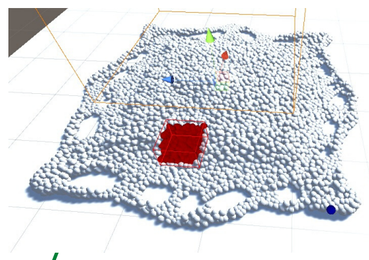
# EVALUATION

- POF system increases the performance and memory efficiency.
- Hash system benefits to find particles.
- Surface recognition helps to find surface particles.

# IMPLEMENTATION

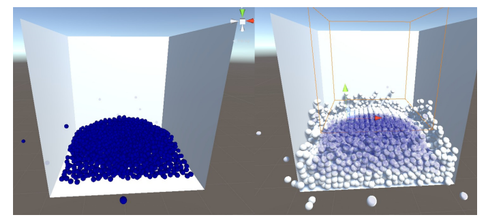
## Hashing

Hashing is a method to mapping particles in a three-dimensional space converted to the one-dimensional hash table.



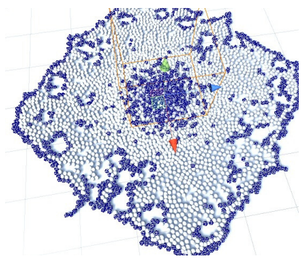
## Surface Recognition

Surface recognition algorithm detects surface particles and the other necessary data about a particle.



## Zhu&Bridson

Zhu and Bridson[7] offers an alternative solution to simulate liquids and mentions surface reconstruction from particles.



POF

# Objectives

1. Using particle based fluid simulation through the Unity
2. Recognizing surface particles mathematically.
3. Creating stable test environment for users.
4. Establishing a system to comparing algorithms.

# Conclusion

Various methods are implemented to get better results by doing research. POF project concentrates on solving computational difficulty problems by increasing performance and efficiency in particle-based fluid simulation. POF makes easier to simulate with higher quantities of particles or getting better results with the same number of particles by using the hash algorithm and surface particle recognition algorithm.