## Data Storage Solutions

## Aims

Our aims for this trimester include (1) To identify a variety of data storage solution systems for the company to consider. (2) To complete extensive research regarding the scalability, security, as well as uptime potential of these systems. (3) From this research, determine the most suitable data storage system for the company in consultation with the IoT, DevOps, Game Development and Cyber Security Teams. (4) Begin setup of the data storage solution system. (5). Whist waiting for the creation of the company’s data, test the data storage solution system by implementing sample datasets. (6). Once the company’s data has been created, implement it into the data storage solution system. (7) Prepare for future data implementation and management.

## Goal

Our goals consist of identifying, as well as developing and maintaining an advanced open-source data storage solution system that can store data created by our IoT Sensor, Game Development and Data Engineering Teams.

## Process

We chose MangoDB, which is a fully managed cloud database that handles all the complexity of deploying, managing, and healing the deployments on the cloud service provider.

The procedure of using this is straightforward. Create an account, instal a free-tier cluster, set network access and a user, and connect to the cluster. Using a MongoDB Atlas driver in your code or Atlas' built-in Data Explorer to perform CRUD operations is simple. MangoDB

We chose MangoDB, which is a fully managed cloud database that handles all the complexity of deploying, managing, and healing the deployments on the cloud service provider.

The procedure of using this is straightforward. Create an account, instal a free-tier cluster, set network access and a user, and connect to the cluster. Using a MongoDB Atlas driver in your code or Atlas' built-in Data Explorer to perform CRUD operations is simple. MangoDB

Atlas offers free account using a shared cluster with up to 512 MB of Storage also this is a highly secure Database-as-a-Service.

## Problems

The most significant problem our team had to face was to identify the type of data that will be stored in the database. With the changing requirements of the type data that is to be stored we had to perform relevant research on different database systems.

Secondly, the unavailability of datasets to test the database was had major delays in our progress to complete the process of database creation.

Thirdly, our team had to go through a major learning curve in understanding the MongoDB system. We used different learning platforms such as LinkedIn Learning, MongoDB University and YouTube to learn MongoDB.