

# Smart Digital Library, Metaverse Dido

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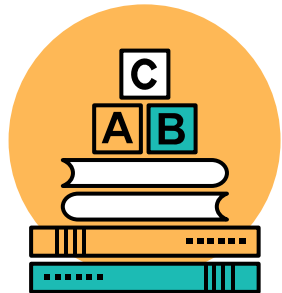
Goal & Method

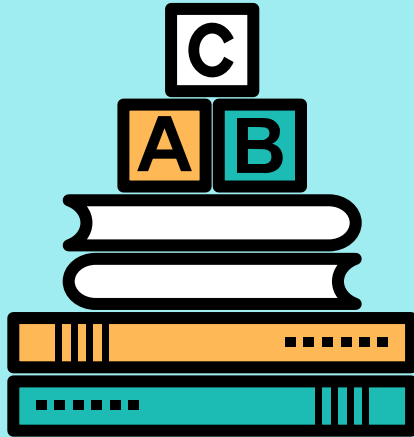
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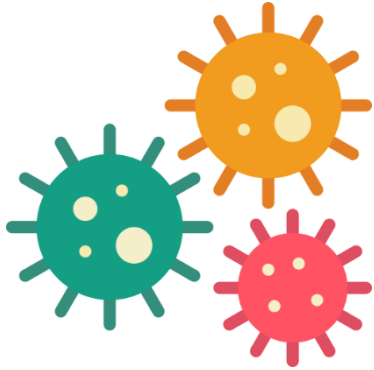
Effect





# 1. Overview

# Background



## COVID-19

Restrictions on the use of multi-use facilities due to COVID-19



## Library

Expand the user base by connecting various media materials in the library to a virtual community



## Metaverse

Perform multiple functions such as online meeting, media room, and chatbot in the metaverse

# Background



ONLINE MEETING

01.

Online meeting service grow 3.3 times more than before COVID-19 as non-face-to-face requests increase after the pandemic

The e-book usage rate is growing at an average annual rate of 303%, reaching \$20.8 billion in the global publishing market, accounting for 18% of the total



E-BOOK

02.

Smart Digital Library, Metaverse Dido

# Background



OTT SERVICE

03.

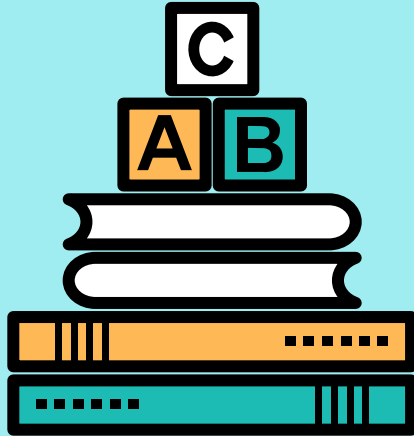
OTT captivates people's eyes and ears among non-face-to-face services, allowing users to consume desired contents anytime, anywhere, transcending time and space constraints

Chatbot creates virtual customer service agent that provide 24/7 service, and play a variety of roles including marketing, sales, and daily tasks



CHATBOT

04.



## 2. Goal & Method

Development of a Virtual Library in Unity & VR Chat for Smart Campus

# Our Goal



## ONLINE MEETING

Creating a virtual meet-up discussion facility



## KINGOBOT

Provide School Life and Academic guidance



## READING ROOM

Create an information hub that utilizes E-books database and private rooms



## DVD ROOM

Open streaming platform



# ONLINE MEETING ROOM



**Video Conference  
System**



**Seat reservation  
management**



**Video View  
Material sharing**



**Annotatable Board**  
Creating an  
interface to write

# KINGO BOT



**24-hour solution**  
School Life and Academic-  
related Inquiries

# READING ROOM



## **Reservation system**

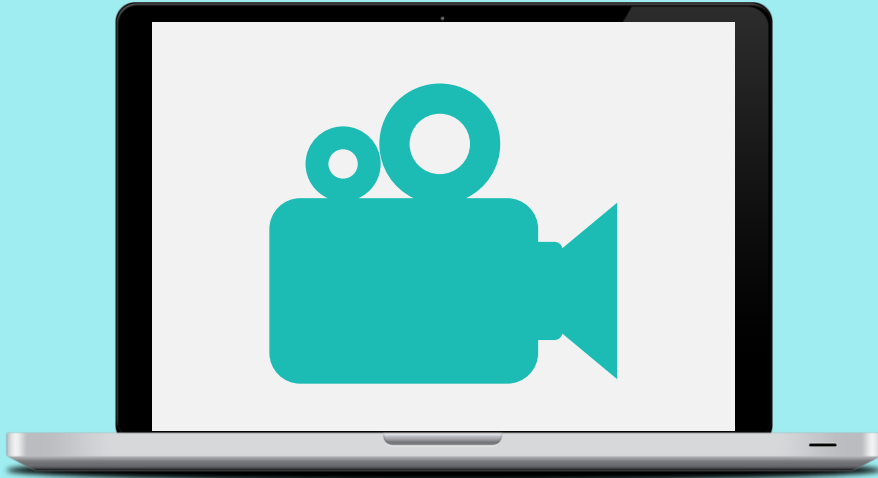
Metaverse room reservation  
for private use



## **E-Book**

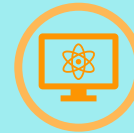
24/7 Accessible  
reading material

# DVD ROOM



## **Video Streaming**

Screening by utilizing public API (e.g. Youtube)



## **Pre-recorded Lecture**

Provide mock class environment

# Development tools



**VRChat**

User Interaction  
with Library  
Environment



**Unity**

3-Dimensional  
World Creation



**Flask**

E-Book Database  
Access & Enable  
Chatbot service  
using API

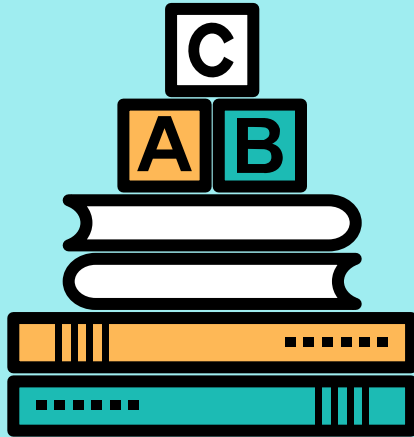


**MySQL**

Relational  
Database  
Creation and  
Maintenance

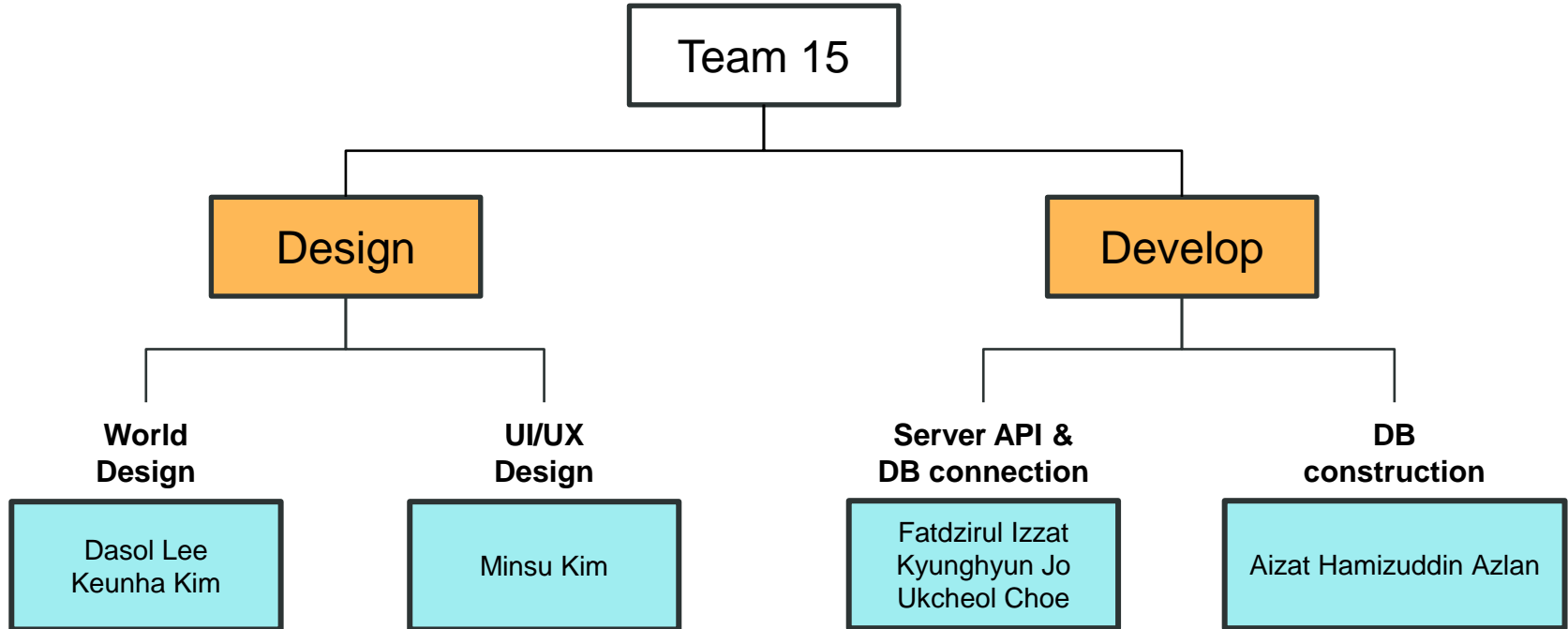
**Frontend**

**Backend**



### 3. Team & Plan

# Team formation



# Planning in details



## step1

4<sup>th</sup> week of September  
~ October

- Plan and Design the Metaverse World by Unity and VRChat
- Set up server and API with Flask
- Construct Database storage using MySQL

Dasol

Keunha

Minsu

Izzat

Kyunghyun

Ukcheol

Aizat

## step2

November

- Improve UI/UX design of specific functions
- Integrate server and database

Dasol

Keunha

Minsu

Aizat

Izzat

Kyunghyun

Ukcheol

## step3

Mid November  
~ December

- Connect frontend and backend
- Modify and supplement the service

Dasol

Keunha

Minsu

Aizat

Izzat

Kyunghyun

Ukcheol

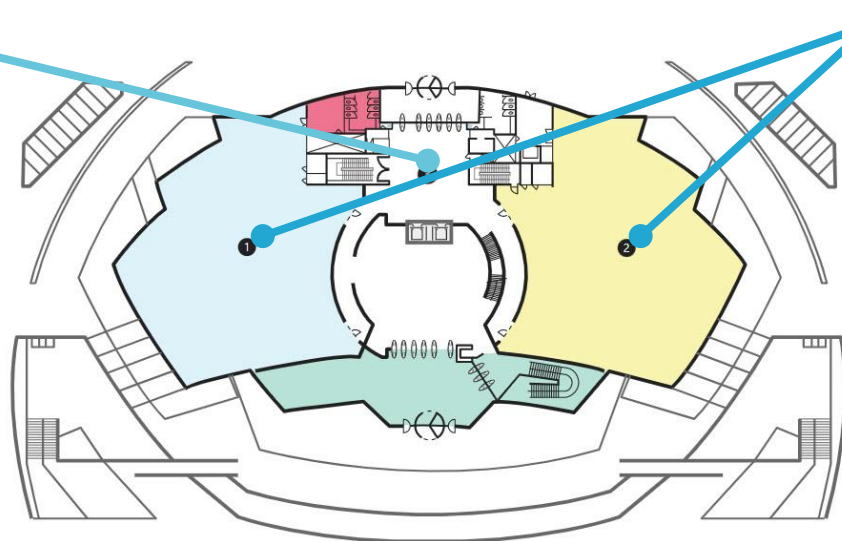


# 1<sup>st</sup> Floor

Kingo Bot



This bot will help you with  
your campus life and  
Academic inquiries.



Reading Room



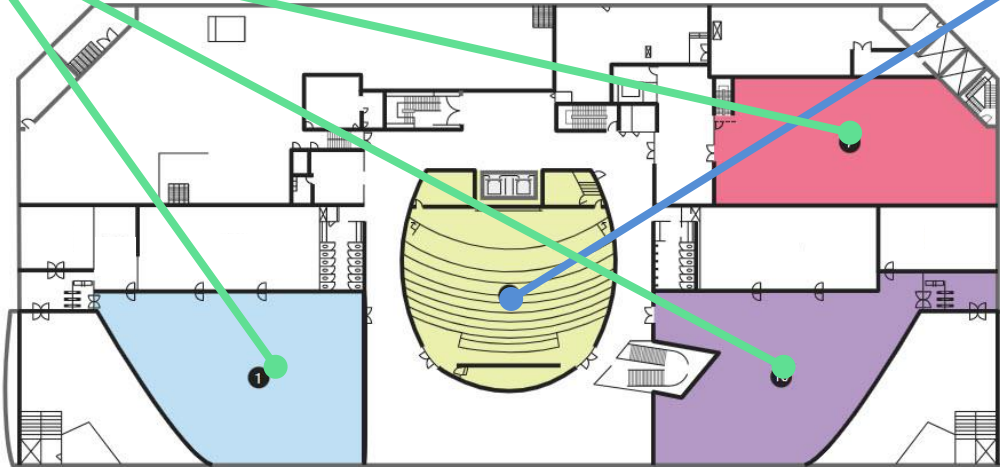
If you enter this room,  
you can read E-books anywhere.

# 2<sup>nd</sup> Floor

## Meeting Room



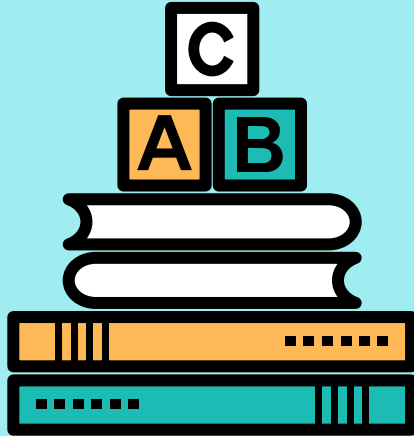
You can reserve this room to meet in metaverse. You can see video together and also use white board to presentation.



## DVD Room



You can see some movies, lectures, etc.



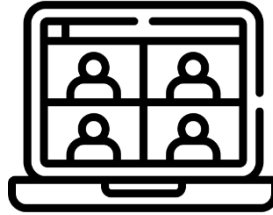
## 4. Effect

Expected Effects

# Effects & Benefits



**Borrow and Read books**



**Conference**



**Get information**

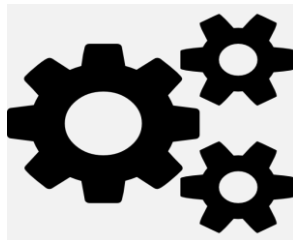
**Without threat  
of Pandemic  
Any time  
Anywhere**

**Can access  
data In the  
absolutely new  
world**

**Innovative  
Active  
experience**

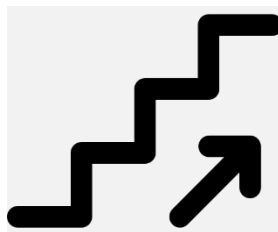
# Maybe in future

This project can be fundamental of...



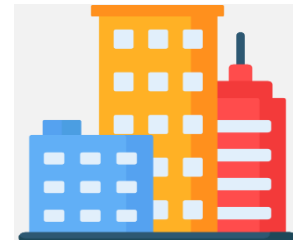
## Add another functions

Actions can do in our library



## Add another floors

Like our real library, provide expanded space



## Add another buildings

In SKKU such as classroom