Exhibition in VRchat.

소프트웨어공학개론 12조

INDEX

Exhibition for graduation project

Background | Overview | Design Concept | Development | Effects and Benefits

Exhibition of graduation works in the existing ways

Students exhibit their graduation works, interact with many people, and exchange opinion

Exhibition for graduation project

Background | Overview | Design Concept | Development | Effects and Benefits

Exhibition of graduation works in the existing ways

They vote for their favorite works and hold awards and presentations accordingly

Exhibition for graduation project

Problems

- Problems with COVID-19
- Problems of existing way

Why online?

- Solve social problems
- Convenience

Exhibition for graduation project

Problems with COVID-19

출처: JHU CSSE COVID-19 Data · 최종 업데이트: 1일 전

대한민국 ▼   전체 ▼

2,500
2,000
1,500
1,000
500
0

5월 7일   7월 30일   10월 22일   1월 14일   4월 8일   7월 1일   9월 23일

2021년 9월 24일
신규 확진자: 3,270
7일 평균: 2,054

● 신규 확진자   ― 7일 평균

- The vaccination rate is Rising, but the number of confirmed cases of COVID-19 has not decreased and is increasing.

- In particular, in recent cases, concerns about COVID-19 are growing as it hits the highest number ever.

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Background | Overview | Design Concept | Development | Effects and Benefits

Problems with COVID-19

<사회적 거리두기 주요 조치 내용(9.6~10.3)>

- Accordingly, the "Social Distancing" plan is also getting stronger.

- In this situation, it is unreasonable to hold an exhibition of graduation works in the existing way.

Exhibition for graduation project

Problems of existing way

표 5. 오프라인전시와 온라인전시 비교 64)

비교측면	오프라인 전시	온라인 전시
몰입도	높다(3)	낮다(2)
신뢰도	높다(3)	낮다(2)
전시비용	많다(1)	적다(3)
전시기간	짧다(1)	길다(3)
물리적 공간의 제약	제약을 받는다(1)	제약을 받지 않는다(3)
관람자의 참여도	낮다(1)	높다(3)
다른 산업과의 시너지 효과	높다(3)	낮다(1)
표현범위	제약을 받는다(2)	제약받지 않는다(3)
전시정보 제공	(온라인 전시와 비교해)낮다(2)	높다(3)
피드백	낮다(1)	높다(3)
단기간의 마케팅 효과	높다(3)	낮다(1)
장기간의 마케팅 효과	낮다(1)	높다(3)
점수합계	22	30

- This is a comparison table between offline and online exhibitions conducted in a research in the past.

- In these times, the benefits of saving time and money will be significant.

- In addition, since research has been conducted in the past, it seems that the specified problems can also be solved.

Exhibition for graduation project

Advantages of Online exhibition

- The photo on the left is a photo of an online exhibition that has been held so far or is currently underway.

- It is a great advantage to be able to solve social issues and to proceed non-face-to-face in the untact era.

- In addition, it can be seen that the level which immersion and reliability problems that were previously raised as problems can be solved.

Exhibition for graduation project

Goals

Login

with student ID and password

Communicate

between the exhibitors and the visitors one on one

Display

one's graduation work online

Likes

express visitors' enjoyment

Like Rank

display the status of likes in real time

Exhibition for graduation project

1. Works are divided into different fields
   Different fields include AI, security, system and etc...

Since the works are divided by field, visitors can concentrate on the areas they are interested in. In addition, since the fields are divided, the subject of the work can be grasped more quickly.
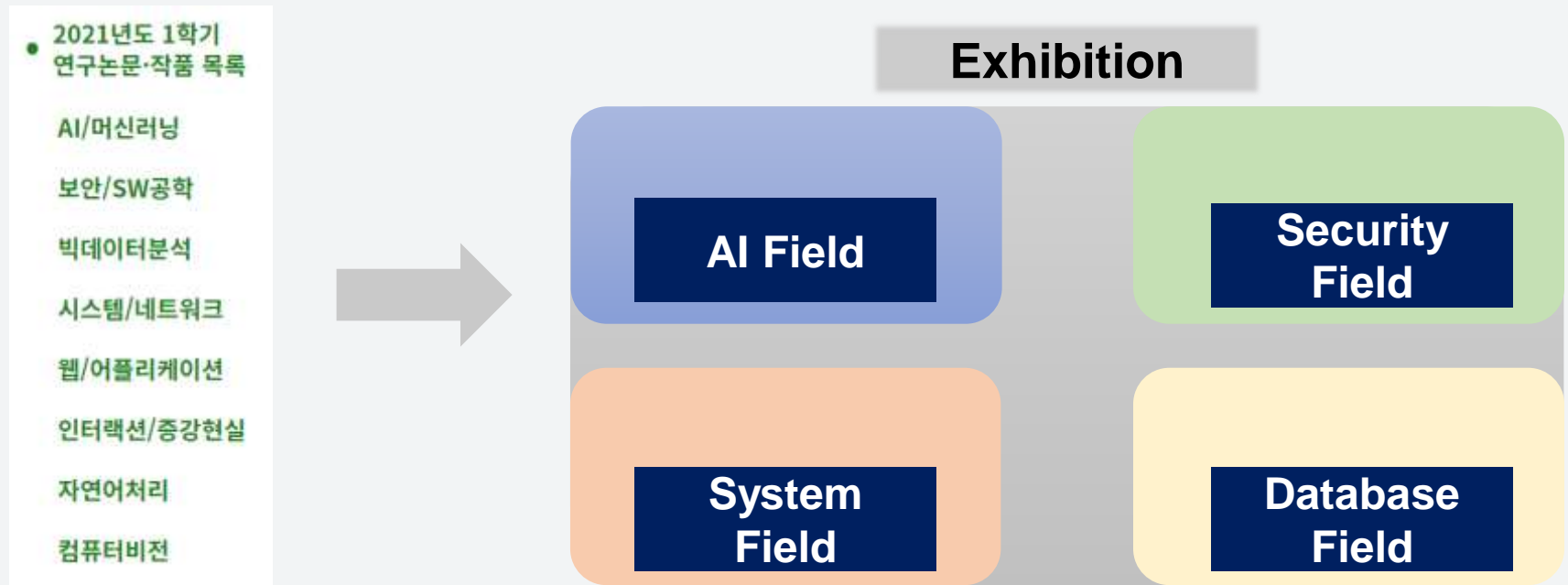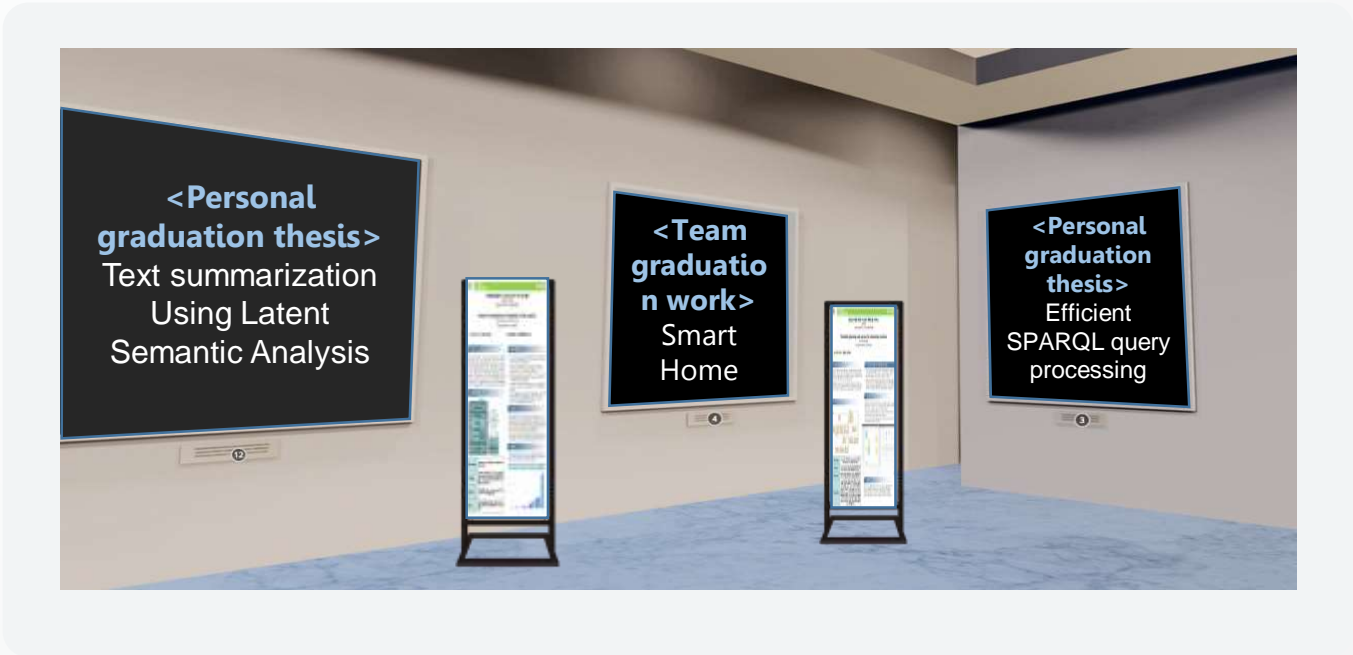
Exhibition for graduation project

2. Posters of graduation works are displayed

Exhibitors can summarize and deliver their graduation work/paper contents at once.
Visitors can grasp the overall contents at a glance.

포스터 출처: https://cs.skku.edu/gp/exhibition/196

Design concept #1
Exhibit posters on the wall

Design concept #2
Exhibit posters on the
standing board

Exhibition for graduation project

3. You can click 'likes' mark on your favorite work

Visitors can participate in exhibition actively by clicking 'likes' to the work.
Also, exhibitors can know what visitors think about their work.
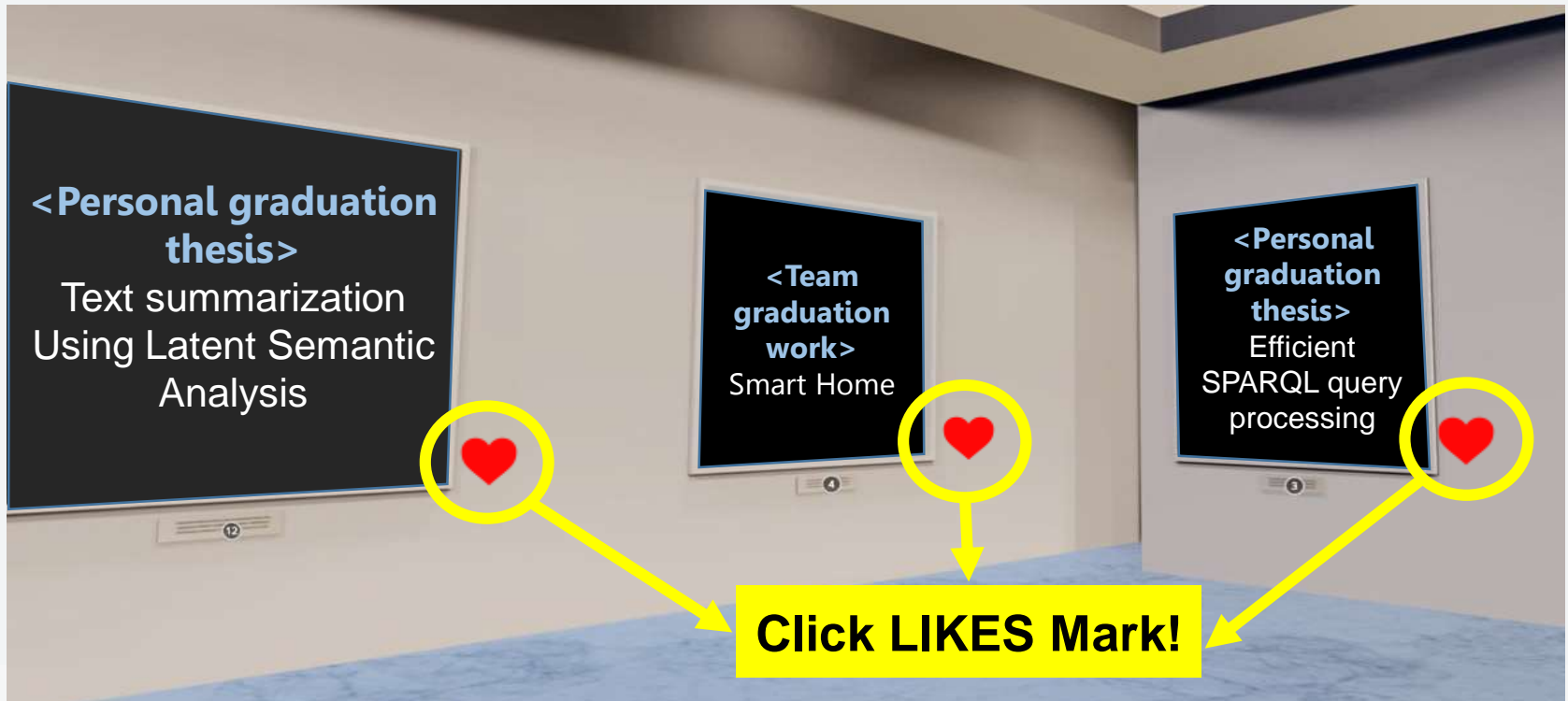
Exhibition for graduation project

Background | Overview | **Design Concept** | Development | Effects and Benefits

4. You can see the number of likes
at the entrance of the exhibition in real time

This can help visitors decide which works to watch.
It can also provide some fun for graduation exhibitions.

'LIKES' RANK

1. 김*현 "Smart Home"

2. 박*수 "Online Banking"

3. 윤*영 "Web Hacking"

4. 구*한 "Android Apps"

5. 강*하 "Metaverse"

Exhibition for graduation project

5. If you have any questions to the exhibitor, You can communicate 1:1 in real time

It provides visitors an opportunity to understand the work in more detail, while also providing exhibitors opportunity to explain their work in detail.

Visitor

Exhibitor

Exhibition for graduation project

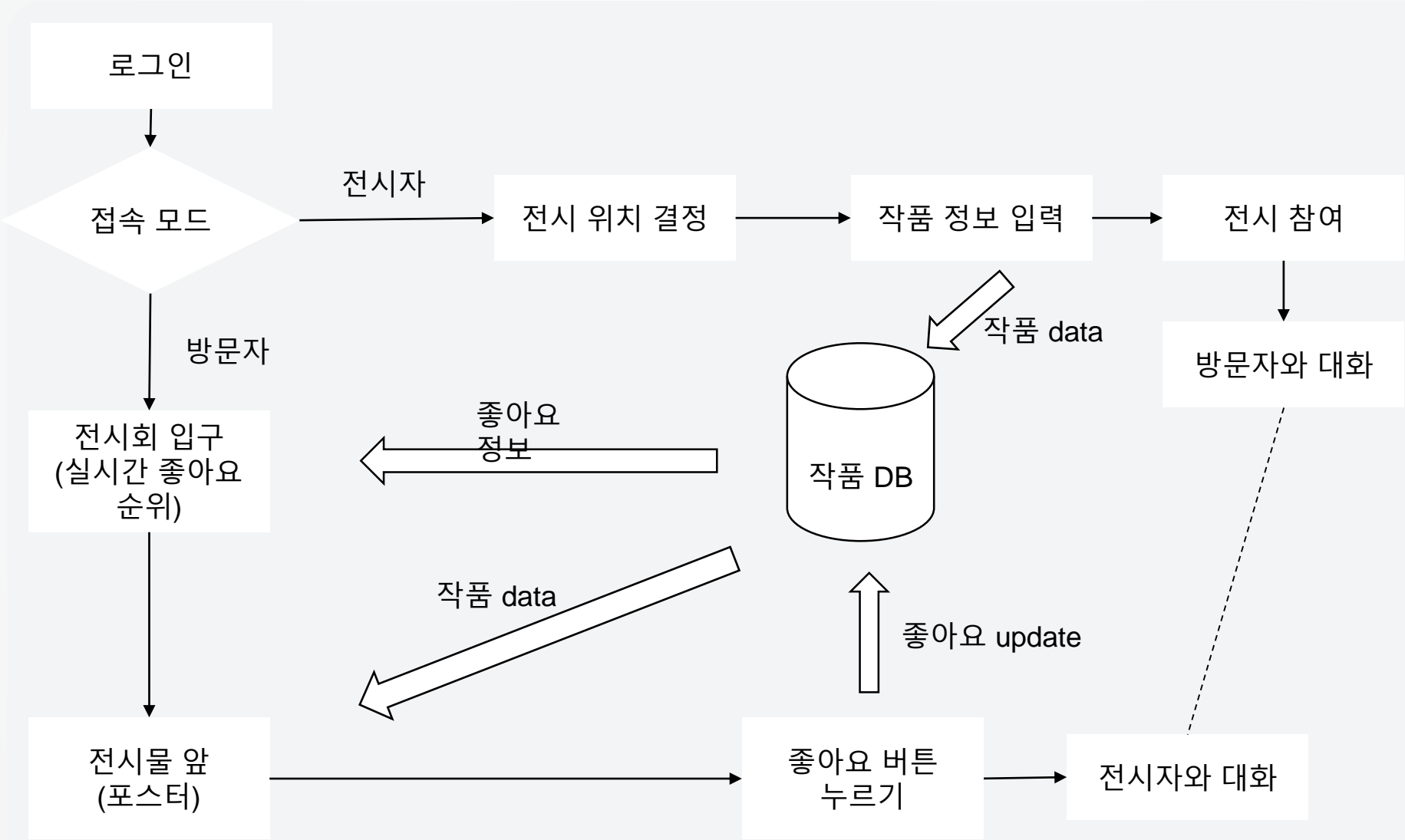Background | Overview | **Design Concept** | Development | Effects and Benefits

5. If you have any questions to the exhibitor,
You can communicate 1:1 in real time

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Flowchart

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Development Tool

Front-end & 3D Engine

3D Object Source

Back-end

Exhibition for graduation project

Development Tool - details

Front-end & 3D Engine

Front-end and 3D space that users will use is developed by Unity.

- Tool: Unity
- Sdk: VR CHAT
- Language: C#

3D Object Source

3D Object Source and UI Source are self-made or purchased from Unity Asset Store, an open market provided by Unity.

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Development Tool - details

Back-end

We use AWS (Amazon Web Service) provided by Amazon as a server that communicates with the frontend and stores the DB.
However, since it is a small project, DB server and web server are created on one server.
DB is made of mysql and App server is made of Node.js Framework.

- Server: AWS
- Environment: Node.js
- Language: Javascript
- Database: Mysql

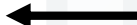# Exhibition for graduation project

Architecture

Back-end

Front-end (3D Engine)

Database

Database

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Background | Overview | Design Concept | Development | Effects and Benefits

Development Schedule

Schedule for Team 12												
#	Contents		Timeline									
			Week5	Week6	Week7	Week8	Week9	Week10	Week11	Week12	Week13	Week14
1	Requirement Specification		██	██	██							
2	Design	Architecture				██	██					
3		Define Class				██	██					
4	Implement	Component						██	██			
5		Integration							██	██		
6	Code Review									██	██	
7	Testing									██	██	
8	Prepare Final Presentation											██

Exhibition for graduation project

Effects and Benefits

Increase Accessibility

Visitors can easily visit the graduation exhibition online which has no time and space restrictions.

Decrease Cost

There is no location rental fee!
The process of graduation exhibition is all online.