Report on

Enhanced Virtual Reality Experience Platform(EVREP)

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Prepared By:

2211402042, QM Asif Tanjim
2211129642, Nowren Mahjabin Khan
2013287642, Musaddik Ibne munsur

Course Instructor:

Prof. Dr. Kamruddin Nur

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Project Overview

EVREP intends to develop an advanced DBS that enhances virtual reality experiences with high efficacy while managing reality experiences, user interactions, feedback, and recommendations with high efficiency. The biggest target of the wide circle is the improvement and personalization of VR content to the VR amateurs, developers, and researchers. The system will, therefore, focus on storing and managing a great variation of VR scenarios for users to ensure different and complete immersion experiences. Tracking the interaction analysis done by users in using VR will also be carried out by the system to realize how they interact with VR content, hence capturing useful insights about user behavior and preference. Collecting feedback will be the improvement in the continuous cycle of VR experiences through the incorporation of users' suggestions and problems raised in the process. These will be able to give personalized recommendations based on user preferences and history of interaction; hence, there is the assurance of a higher level of satisfaction and engagement by users. To further enhance the system, EVREP will integrate real-time data analytics to monitor user interactions and system performance. Interactive tutorials will help users get acquainted with the system quickly. Community features will allow users to share experiences and collaborate, enhancing engagement. The system will be compatible with various devices, ensuring seamless transitions between them. Accessibility features will cater to users with disabilities, promoting inclusivity. Cloud integration will allow users to access their data from anywhere, and advanced security measures will protect user data and privacy. A focus on sustainability will ensure eco-friendly practices, and augmented reality (AR) features will provide even more immersive experiences. Collaboration tools will facilitate team projects and social interactions within the VR environment. Quality assurance will focus on attributes such as reliability, scalability, usability, and security, ensuring the system can handle increased data and user loads while maintaining ease of use and data protection. This project will be engineered within budget and on time, aiming for timely delivery and cost-effectiveness. By adhering to these principles, EVREP believes it will deliver an advanced DBS that transforms the way users experience and interact with virtual reality.

Contributions

Table 1: Team Member's Contributions

ID	Name	Tasks	Contribution
2211402042	QM Asif Tanjim	• Project Overview • Project description • Project Objective • Conceptual and Logical Diagram • Query part 1	35%
2211129642	Nowren Mahjabin Khan	• Scope Statement • Table Creation • Query part 2 • Physical Diagram • Key Milestone	35%
2013287625	Musaddik Ibne Munsur	• Table creation • Roles and Responsibilities • Project Deliverable • Conclusion • Acknowledge	30%

1 Project Title

Enhanced Virtual Reality Experience Platform(EVREP)

2 Project Description

Our EVREP project is an advanced Data and Behavior System (DBS) designed to **revolutionize our virtual reality (VR) experiences**. We aim to enhance **efficacy and efficiency** in managing **reality experiences**, **user interactions**, **feedback**, and **recommendations**. Our goal is to personalize VR content for amateurs, developers, and researchers by storing and managing various VR scenarios to ensure diverse and immersive experiences.

Through the **Interaction Analysis** module, we track how users engage with VR content, capturing valuable insights into user behavior and preferences. This data helps us continuously refine VR experiences, ensuring they align with your expectations and preferences.

Our **Feedback Integration** feature collects and incorporates your feedback, addressing suggestions and issues to enhance satisfaction and engagement. We provide personalized recommendations based on your preferences and interaction history to offer a tailored VR experience.

Our **Real-time Data Analytics** monitors user interactions and system performance, optimizing the VR experience. **Interactive Tutorials** help you quickly become acquainted with the system, while our **Community Features** encourage experience sharing and collaboration, boosting engagement.

We ensure **Device Compatibility**, providing seamless transitions between different devices for a consistent VR experience. Our accessibility features cater to users with disabilities, promoting an inclusive environment. **Cloud Integration** allows you to access your data from anywhere, enhancing flexibility and convenience.

Advanced security measures protect your data and privacy, ensuring robust **Data Protection**. We adopt eco-friendly practices through our **Sustainability Focus**, while **Augmented Reality (AR) Integration** provides even more immersive experiences.

Our **Collaboration Tools** facilitate team projects and social interactions within the VR environment. The system undergoes rigorous quality assurance to emphasize reliability, scalability, usability, and security, ensuring it can handle increased data and user loads while maintaining ease of use and data protection.

3 Project Objective

The objectives of this project are:

- **Experience immersive VR Content:** The primary objective is to exhibit VR scenarios to meet the diverse needs and preferences of amateurs, developers, and researchers, ensuring a more engaging and immersive experience. With this platform, it can be stored and managed a wide variety of VR content to provide users with rich and comprehensive immersion experiences.
- **Display Personalize VR Contents:** The project aims to design and implement Focus on VR amateurs, developers, and researchers by offering tailored VR content that meets their specific needs and interests, thereby fostering a community of engaged and enthusiastic users. Moreover, stores and manages a diverse array of VR scenarios that ensure complete and varied immersion experiences, allowing users to explore and interact with different virtual worlds and environments.
- **Track User Interactions:**Implement sophisticated tools to track and analyze how users interact with VR content, capturing valuable insights into user behavior, and preferences that can be used to refine and enhance the VR experiences offered and Utilize this data to gain a deep understanding of user engagement patterns, enabling the system to adapt and tailor VR experiences to better meet the needs and expectations of individual users.
- **Incorporate User Feedback:** Establish a robust feedback mechanism that collects user suggestions and concerns, ensuring that the system continuously evolves and improves based on real user input and experiences. Also, this project leverage user feedback and interaction history to provide personalized recommendations, enhancing user satisfaction and engagement by delivering content that resonates with their preferences and interests.
- **Integrate Real-Time Data Analytics:** Use real-time data analytics to continuously monitor user interactions and system performance, ensuring that the system operates smoothly and efficiently while providing actionable insights for ongoing optimization. Apply these analytics to refine and personalize VR content and experiences, ensuring that users receive a consistently high-quality and engaging experience that meets their individual needs.
- **Provide Interactive Tutorials:**Develop comprehensive and interactive tutorials that help users quickly familiarize themselves with the system, ensuring a smooth and easy onboarding process that maximizes user confidence and competence. It ensures that these tutorials are engaging and user-friendly, making it easy for users to navigate and utilize the system's features to their fullest potential.
- **Enable Community Features:**Integrate community features that facilitate experience sharing and collaboration among users, building a supportive and engaged user community that enhances the overall VR experience. Create a platform where users can share their VR experiences, collaborate on projects, and support each other, fostering a sense of belonging and community engagement.
- **Ensure Device Compatibility:** Ensure that the system is compatible with a wide range of devices, allowing users to enjoy smooth and seamless transitions between different platforms and devices without any loss of functionality. Make the system accessible from any device, providing users with the flexibility and convenience to access their VR experiences whenever and wherever they want.
- **Integrate Cloud Services:** Allow users to access their data from anywhere through cloud integration, providing flexibility and convenience while ensuring that their data is always available and secure.

Implement advanced security measures to protect user data and privacy, ensuring that users can trust the system with their personal information.

- **Focus on Sustainability:** Adopt sustainable practices in the development and operation of the system, minimizing environmental impact and promoting eco-friendly initiatives. Ensure that the system contributes to environmental sustainability by incorporating green technologies and practices.
- **Facilitate Collaboration Tools:** Provide tools that facilitate collaboration within VR environments, supporting team projects and social interactions that enhance the VR experience. Enhance the social aspect of VR by enabling users to interact and collaborate in real-time, promoting a sense of community and shared experience.
- **Ensure Quality Assurance:** Focus on making the system reliable and scalable to handle increased data and user loads, ensuring consistent performance and user satisfaction. Ensures the system is easy to use and secure, maintaining user confidence and trust by providing a dependable and safe VR environment.

Overall, the objective of the EVREP project is to revolutionize virtual reality experiences, providing exceptional performance, personalization, accessibility, and engagement for users and developers alike.

4 Project Scope

4.1 Scope Statement:

The EVREP project aims to change virtual reality (VR) experiences by using a new Data and Behavior System (DBS). This system wants to improve how people use and enjoy VR experiences. It will help manage user interactions, collect feedback, and give suggestions, offering custom VR content for beginners, developers, and researchers. It saves and organizes different virtual reality experiences to make them feel real and engaging. The main features include checking how users interact with the system, using feedback to improve suggestions, analyzing real-time data for better performance, and providing interactive guides to help new users get started. The project focuses on making sure devices work together, are easy to use, can connect to the cloud, and have strong security to keep user information safe. Community features help people work together, and adding AR makes the experience more engaging. Using eco-friendly methods and focusing on sustainability are important parts of the project's values. Also, teamwork tools help groups work together on projects in the VR setting. Strict quality checks make sure the system is reliable, can grow with demand, is easy to use, and is safe. This makes EVREP a modern solution for a smooth, inclusive, and enjoyable virtual reality experience. This all-around plan makes EVREP a leader in new VR technology.

4.2 Key Milestones:

- Development of the advanced Data and Behavior System (DBS) for VR experiences.
- Implementation of real-time data analytics and feedback integration features.
- Integration of interaction analysis modules and accessibility enhancements.
- Deployment of device compatibility solutions and seamless cloud integration.
- Deployment of device compatibility solutions and seamless cloud integration.

4.3 Roles and Responsibilities:

The Development Team is responsible for designing, developing, and testing the Data and Behavior System (DBS) and other features of the EVREP project. The Project Manager oversees project execution, resource allocation, and timeline management, and ensures project milestones are met. Stakeholders, including amateurs, developers, and researchers, provide feedback, participate in testing, and support the development process by sharing insights and suggestions.

5 Deliverable

- **User Portal:**Provides users with the ability to manage their profiles, settings, and overall VR experience. It ensures a personalized and seamless interaction within the platform, making the user journey smooth and intuitive.
- **VR content Portal:** Hosts and organizes a variety of VR scenarios, ensuring users have access to diverse and immersive experiences. It streamlines content discovery and management for all users.
- **Interaction Portal:**Tracks and analyzes how users engage with the VR environment, capturing detailed insights into behavior and preferences. This portal helps in continually refining and improving the system based on user interaction data.
- **Feedback Portal:** Collects and incorporates user feedback to address suggestions and issues promptly. It enhances user satisfaction by ensuring that the VR experience evolves according to user needs and preferences.
- **Recommendation Portal:**Provides personalized VR content suggestions based on user preferences and interaction history. It enhances user engagement by offering tailored experiences that match individual interests.
- **Quality Assurance Portal:**Conducts rigorous testing to ensure the platform's reliability, scalability, usability, and security. This portal is vital for maintaining high standards and a smooth user experience.
- **Device Portal:** Ensures seamless compatibility and transitions between different VR devices, providing a consistent experience regardless of hardware. It addresses device-specific issues and optimizes performance across platforms.
- **Community Portal:**Encourages collaboration and experience sharing among users, fostering a sense of community. It enhances engagement through shared activities and collective interactions within the VR environment.
- **Tutorial Portal:**Offers interactive guides and tutorials to help new users get started with the system efficiently. This portal is designed to make it smooth, providing essential information and tips.
- **Security Portal:**Implements advanced security measures to protect user data and ensure privacy. It safeguards the platform from potential threats, ensuring user trust and data integrity..

6 Diagrams

6.1 Conceptual Design Diagram

Insert design diagram in this section. Sample image insertion is shown in Figure 22.

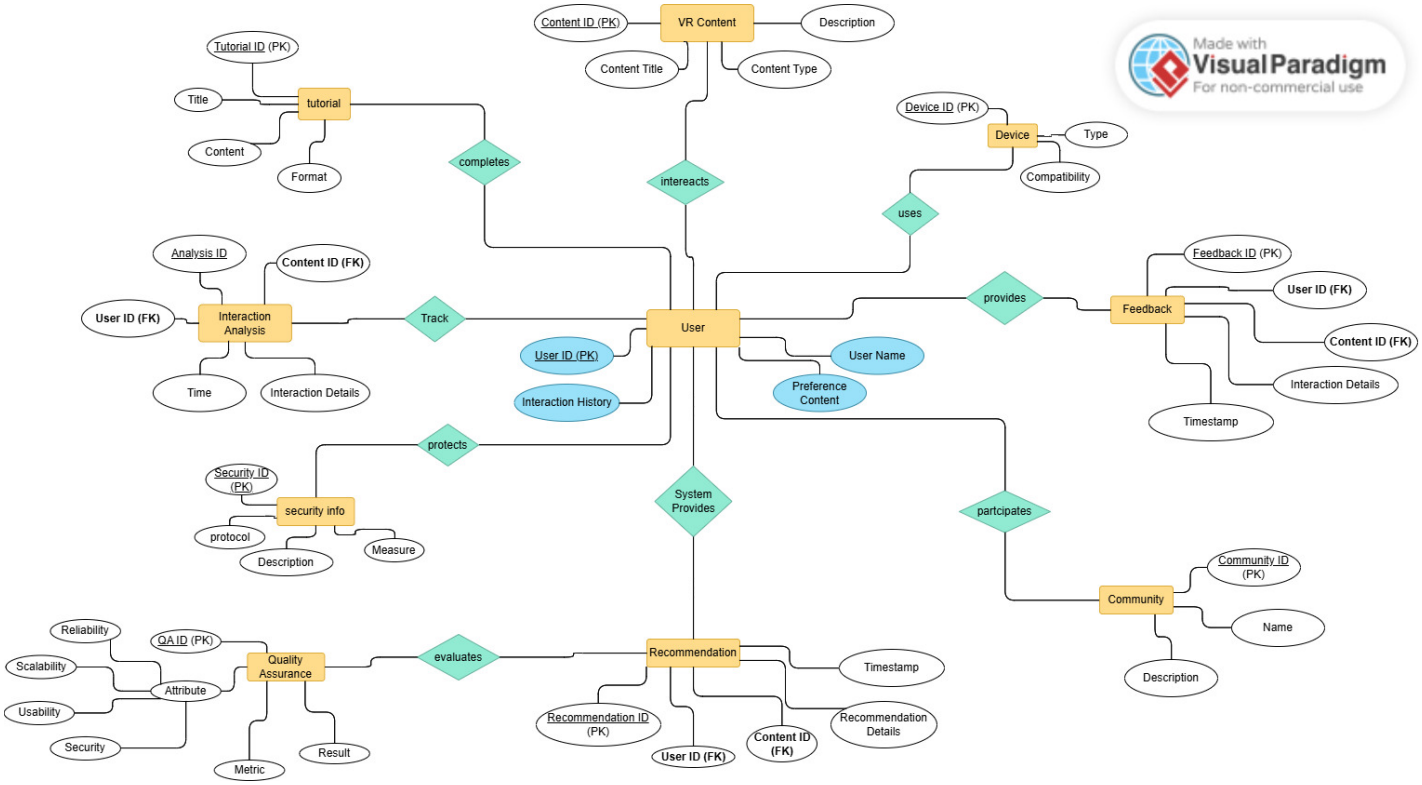


Figure 1: Conceptual design of the database

6.2 Logical Design Diagram

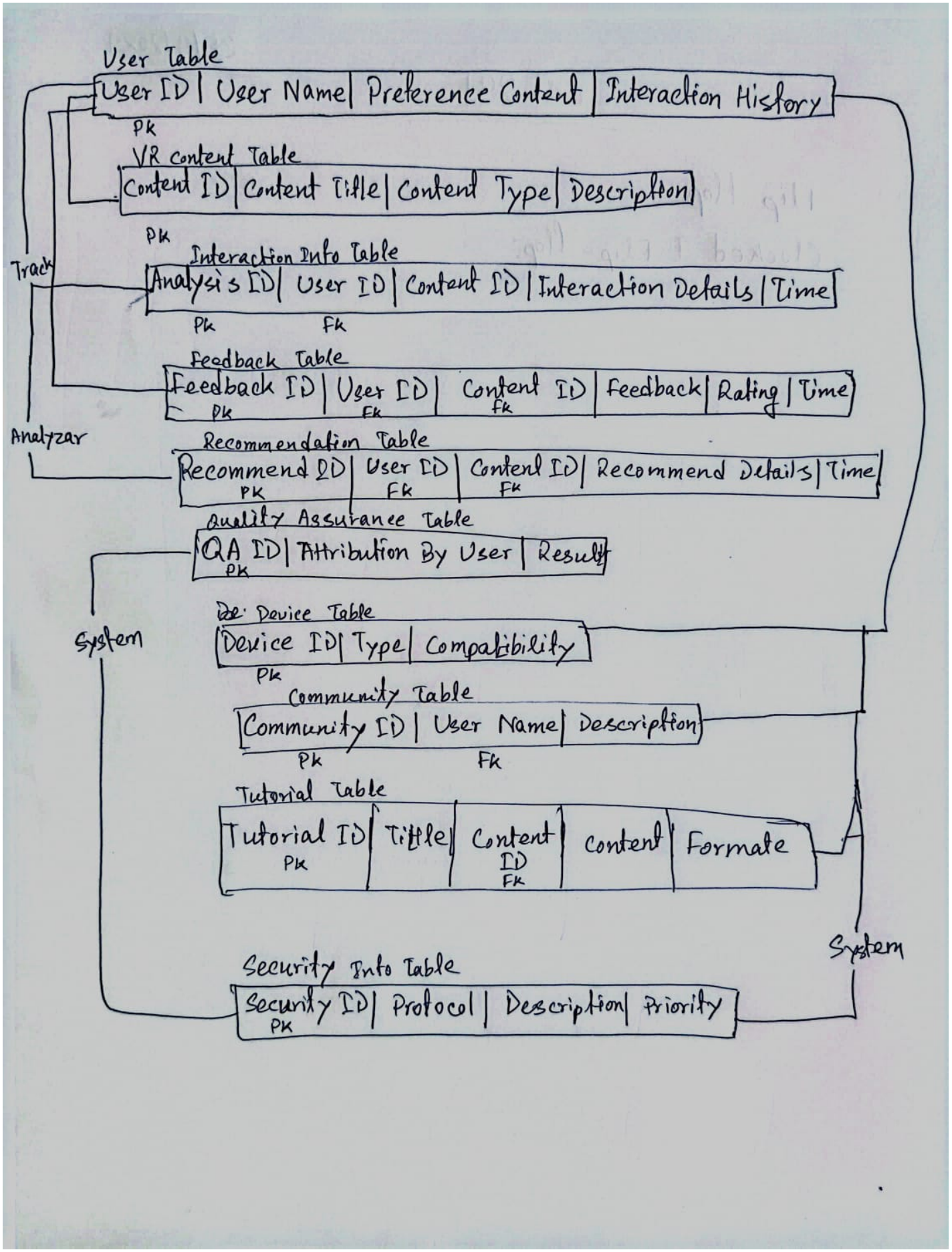


Figure 2: Logical design of the database

6.3 Physical Design Diagram

Insert design diagram in this section. The insertion of the sample image is shown in Figure 3.

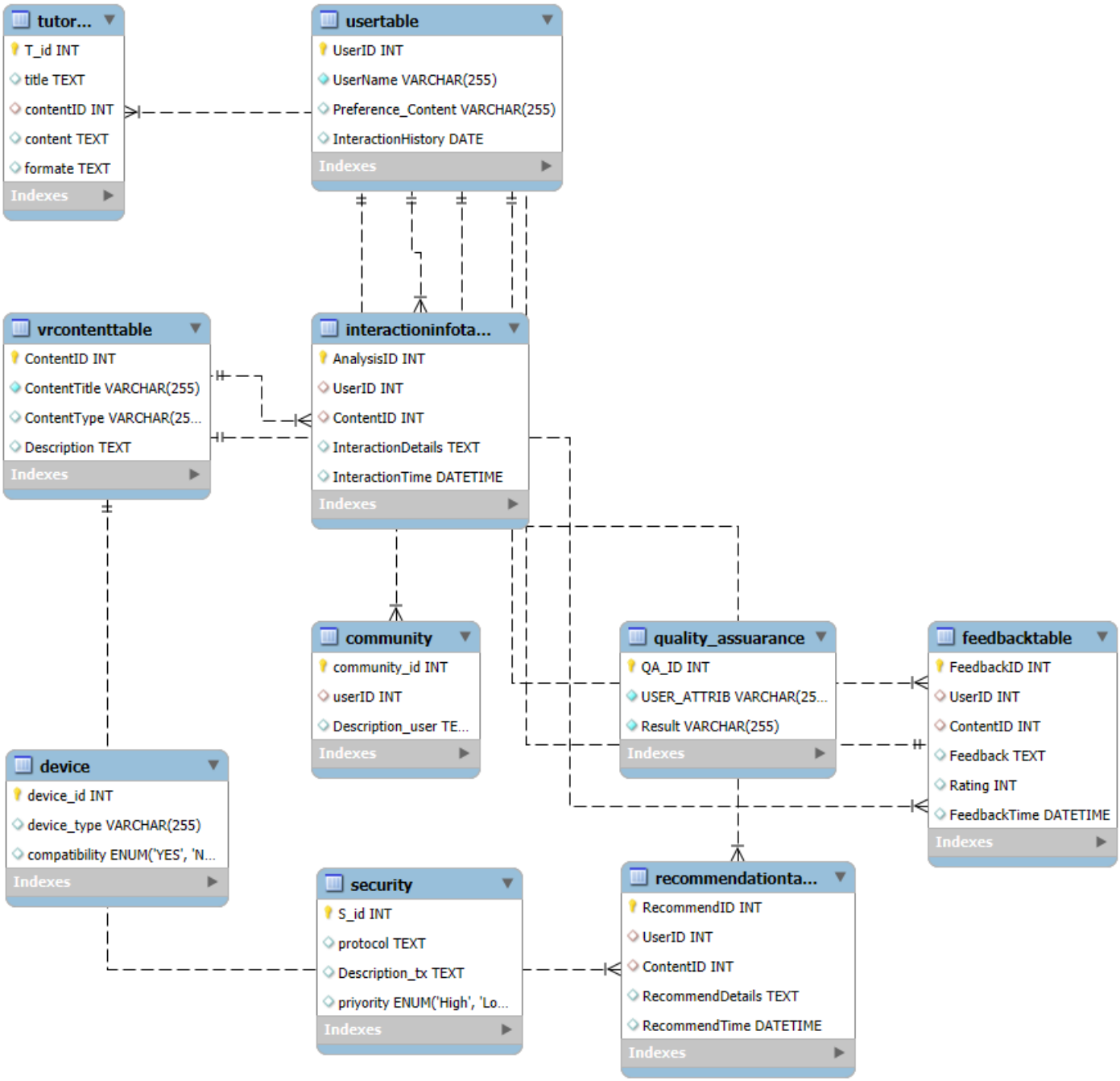


Figure 3: Physical design of the database

7 Table Creation

- **User Table:**

```
SELECT * FROM evrep.usertable;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

UserID	UserName	Preference Content	InteractionHistory
157501	@asiftanjim56	Beat Saber	2024-12-17
157502	@hasammahmud71	Half-Lyfe	2024-12-17
157503	@nowrenriya12	Beat Saber	2024-12-17
157504	@riyadhhaq90	VR CHAT	2024-12-17
157505	@lamyarahman43	Half-Lyfe	2024-12-17
157506	@Alangkarroy78	VR CHAT	2024-12-17
157507	@asifhassan88	The Walking Dead	2024-12-17
157508	@polokhamid001	The Walking Dead	2024-12-17
157509	@sheikhasan22	VR CHAT	2024-12-17
1575010	@mahidhasan112	Star Wars	2024-12-17
1575011	@mahmudullah167	Hajj	2024-12-17
1575012	@safayetjabber66	Hajj	2024-12-17
1575013	@tarinhaq69	REC-Room	2024-12-17
1575014	@raisaahona113	Beat Saber	2024-12-17
1575015	@ferdousmim23	Beat Saber	2024-12-17
1575016	@naziatasmin90	REC-Room	2024-12-17

Figure 4: User Table

```
CREATE TABLE UserTable (
    UserID INT AUTO_INCREMENT PRIMARY KEY,
    UserName VARCHAR(255) NOT NULL,
    Preference Content VARCHAR(255),
    InteractionHistory Date
);
```

- **VR Content Table:**

```
SELECT * FROM evrep.vrcontenttable;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

ContentID	ContentTitle	ContentType	Description
1	Beat Saber	Game	Tile games
2	Half-Lyfe	Game	Shooting games
3	VR Chat	Community	Social Media
4	The Walking Dead	Game	Advanture games
5	Star Wars	Game	Sci-Fi games
6	Hajj	Religious	Spiritual Perform
7	REC-Room	Archietecture	Construtction AR
NULL	NULL	NULL	NULL

Figure 5: VR Content Table

```sql
CREATE TABLE VRContentTable (
    ContentID INT AUTO_INCREMENT PRIMARY KEY,
    ContentTitle VARCHAR(255) NOT NULL,
    ContentType VARCHAR(255),
    Description TEXT
);

```

- **Interaction Info Table:**

```sql
SELECT * FROM evrep.interactioninfotable;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

AnalysisID	UserID	ContentID	InteractionDetails	InteractionTime
900	157501	1	Abide by Policy	2024-12-18 12:50:12
901	157502	2	Abide by Policy	2024-12-18 12:59:53
902	157503	1	Abide by Policy	2024-12-18 12:59:53
903	157504	3	Abide by Policy	2024-12-18 12:59:53
904	157505	2	Abide by Policy	2024-12-18 12:59:53
905	157506	3	Abide by Policy	2024-12-18 12:59:53
906	157507	4	Abide by Policy	2024-12-18 12:59:53
907	157508	4	Abide by Policy	2024-12-18 12:59:53
908	157509	3	Abide by Policy	2024-12-18 12:59:53
909	1575010	5	Abide by Policy	2024-12-18 12:59:53
910	1575011	6	Abide by Policy	2024-12-18 12:59:53
911	1575012	6	Abide by Policy	2024-12-18 12:59:53
912	1575013	7	Abide by Policy	2024-12-18 12:59:53
913	1575014	1	Abide by Policy	2024-12-18 12:59:53
914	1575015	1	Abide by Policy	2024-12-18 12:59:53
915	1575016	7	Abide by Policy	2024-12-18 12:59:53

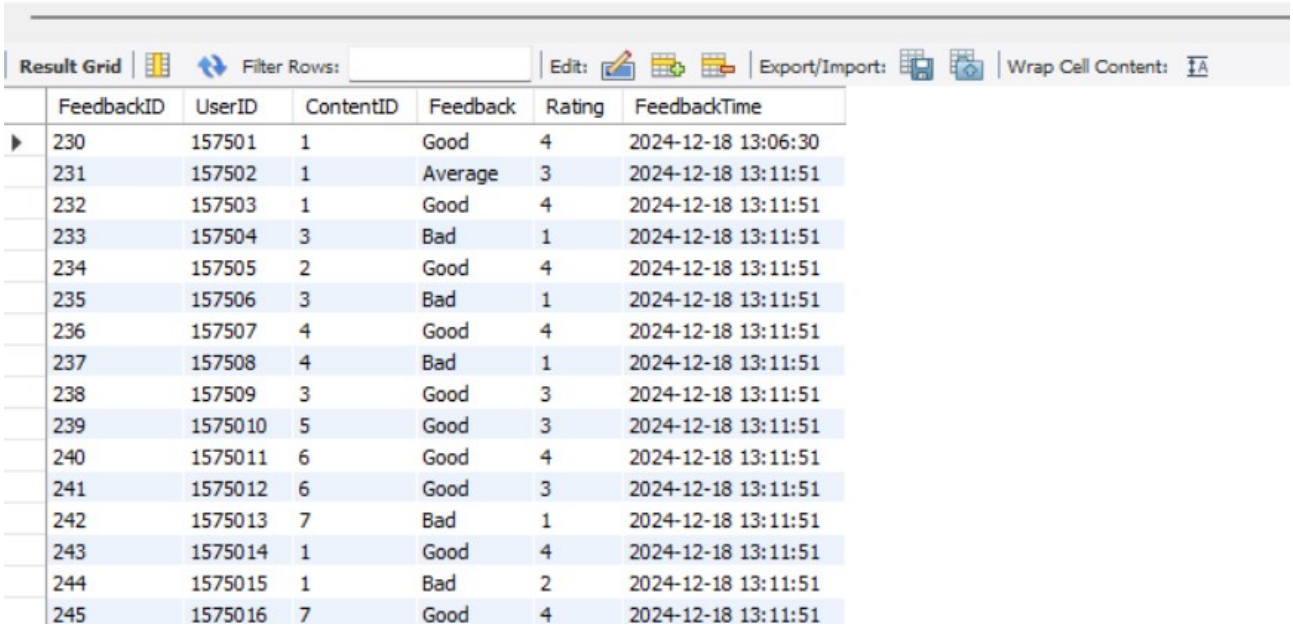
Figure 6: Interaction Info Table

```sql
CREATE TABLE InteractionInfoTable (
    AnalysisID INT AUTO_INCREMENT PRIMARY KEY,
    UserID INT,
    ContentID INT,
    InteractionDetails TEXT,
    InteractionTime DATETIME,
    FOREIGN KEY (UserID) REFERENCES UserTable(UserID),
    FOREIGN KEY (ContentID) REFERENCES VRContentTable(ContentID)
);


```

- **Feedback Table:**

```
1 •   SELECT * FROM evrep.feedbacktable;
```



Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

FeedbackID	UserID	ContentID	Feedback	Rating	FeedbackTime
230	157501	1	Good	4	2024-12-18 13:06:30
231	157502	1	Average	3	2024-12-18 13:11:51
232	157503	1	Good	4	2024-12-18 13:11:51
233	157504	3	Bad	1	2024-12-18 13:11:51
234	157505	2	Good	4	2024-12-18 13:11:51
235	157506	3	Bad	1	2024-12-18 13:11:51
236	157507	4	Good	4	2024-12-18 13:11:51
237	157508	4	Bad	1	2024-12-18 13:11:51
238	157509	3	Good	3	2024-12-18 13:11:51
239	1575010	5	Good	3	2024-12-18 13:11:51
240	1575011	6	Good	4	2024-12-18 13:11:51
241	1575012	6	Good	3	2024-12-18 13:11:51
242	1575013	7	Bad	1	2024-12-18 13:11:51
243	1575014	1	Good	4	2024-12-18 13:11:51
244	1575015	1	Bad	2	2024-12-18 13:11:51
245	1575016	7	Good	4	2024-12-18 13:11:51

Figure 7: Feedback Table

```
1       CREATE TABLE FeedbackTable (
2           FeedbackID INT AUTO_INCREMENT PRIMARY KEY,
3           UserID INT,
4           ContentID INT,
5           Feedback TEXT,
6           Rating INT,
7           FeedbackTime DATETIME,
8           FOREIGN KEY (UserID) REFERENCES UserTable(UserID),
9           FOREIGN KEY (ContentID) REFERENCES VRContentTable(ContentID)
10      );
11
12
```

- **Recommendation Table:**

```
1 •  SELECT * FROM evrep.recommendationtable;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

RecommendID	UserID	ContentID	RecommendDetails	RecommendTime
800	157501	1	User Preference	2024-12-18 13:20:47
801	157502	2	User Preference	2024-12-18 13:23:42
802	157503	1	User Preference	2024-12-18 13:23:42
803	157504	3	User Preference	2024-12-18 13:23:42
804	157505	2	system preferences	2024-12-18 13:23:42
805	157506	3	User Preference	2024-12-18 13:23:42
806	157507	4	system preferences	2024-12-18 13:23:42
807	157508	4	User Preference	2024-12-18 13:23:42
808	157509	3	User Preference	2024-12-18 13:23:42
809	1575010	5	system preferences	2024-12-18 13:23:42
810	1575011	6	User Preference	2024-12-18 13:23:42
811	1575012	6	User Preference	2024-12-18 13:23:42
812	1575013	7	system preferences	2024-12-18 13:23:42
813	1575014	1	system preferences	2024-12-18 13:23:42
814	1575015	1	User Preference	2024-12-18 13:23:42
815	1575016	7	User Preference	2024-12-18 13:23:42

Figure 8: Recommendation Table

```
1         CREATE TABLE RecommendationTable (
2             RecommendID INT AUTO_INCREMENT PRIMARY KEY,
3             UserID INT,
4             ContentID INT,
5             RecommendDetails TEXT,
6             RecommendTime DATETIME,
7             FOREIGN KEY (UserID) REFERENCES UserTable(UserID),
8             FOREIGN KEY (ContentID) REFERENCES VRContentTable(ContentID)
9         );
10
11
```

- **Quality Assuarance Table:**

```
1 •   SELECT * FROM evrep.quality_assuarance;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

QA_ID	USER_ATTRIB	Result
200	Scalability	Satisfied
201	Reliability	Unsatisfied
202	Reliability	Satisfied
203	Scalability	Unatisfied
204	Usabiluty	Satisfied
205	Security	Satisfied
206	Scalability	Satisfied
207	Usabiluty	Unsatisfied
208	Scalability	Unsatisfied
209	Reliability	Satisfied
210	Usabiluty	Unsatisfied
211	Security	Unsatisfied
212	Security	Satisfied
213	Usabiluty	Satisfied
214	Usabiluty	Satisfied
215	Security	Unsatisfied
216	Usabiluty	Satisfied
217	Scalability	Unsatisfied
218	Usabiluty	Satisfied

Figure 9: Quality Assuarance Table

```
1           CREATE TABLE QUALITY_ASSUARANCE(
2           QA_ID INT AUTO_INCREMENT PRIMARY KEY,
3           USER_ATTRIB VARCHAR(255),
4           RESULT TEXT
5       );
6
```

- **Community Table:**

```
1 •  SELECT * FROM evrep.community;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

community_id	userID	Description_user
100	157501	Lead Attributor
101	157502	Lead Coordinator
102	157503	Lead Communicator
103	157504	Lead Attributor
104	157505	Lead Coordinator
105	157506	Lead Communicator
106	157507	Lead Attributor
107	157508	Lead Attributor
108	157509	Lead Attributor
NULL	NULL	NULL

Figure 10: Community Table

```
1        CREATE TABLE COMMUNITY(
2        COMMUNITY_ID INT AUTO_INCREMENT PRIMARY KEY,
3        USERID INT,
4        DESCRIPTION_USER TEXT,
5        FOREIGN KEY(USERID) REFERENCES USERTABLE(USERID)
6    );
7
```

- **Device Table:**

```
1 •    SELECT * FROM evrep.device;
```

esult Grid | Filter Rows:

device_id	device_type	compatibility
1021	Windows	YES
1022	MAC	YES
1023	Linux	YES
1024	Android	NO
1025	Apple	NO
NULL	NULL	NULL

Figure 11: Device Table

```
1          CREATE TABLE DEVICE(
2          DEVICE_ID INT AUTO_INCREMENT PRIMARY KEY,
3          DEVICE_TYPE TEXT,
4         COMPATABILITY ENUM('YES','NO')
5      );
6
```

- **Security Table:**

```
1 •  SELECT * FROM evrep.security;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

S_id	protocol	Description_tx	priyority
4500	IPsec	Internet Protocol Securuity	High
4501	IPsec	Internet Protocol Securuity	Low
4502	SSL	Secure Socket Layer	High
4503	SSL	Secure Socket Layer	Low
4504	HTTPS	HyperText Transfer Protocol Secure	High
4505	HTTPS	HyperText Transfer Protocol Secure	Low
4506	SSH	Secure Shell	High
4507	SSH	Secure Shell	Low
4508	OAuth	Open Authorization	High
4509	OAuth	Open Authorization	Low
NULL	NULL	NULL	NULL

Figure 12: Security Table

```
1            CREATE TABLE SECURTIY(
2            S_ID INT AUTO_INCREMENT PRIMARY KEY,
3            PROTOCOL TEXT,
4            DESCRIPTION_TX TEXT,
5            PRIYORITY ENUM('HIGH', 'LOW')
6        );
7
```

- **Tutorial Table:**

```
1 •  SELECT * FROM evrep.tutorial;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

T_id	title	contentID	content	formate
1200	Tutorial for Beat Saber	1	Entertainment	Game
1201	Tutorial for Half-Lyfe	2	Entertainment	Game
1202	Tutorial for VR Chat	3	Entertainment	Community
1203	Tutorial for The Walking Dead	4	Entertainment	Game
1204	Tutorial for Star Wars	5	Entertainment	Game
1205	Tutorial for Hajj	6	Spiritual	Religius
1206	Tutorial for REC-Room	7	Construction	Architecture

Figure 13: Tutorial Table

```
1            CREATE TABLE TUTORIAL(
2            T_ID INT AUTO_INCREMENT PRIMARY KEY,
3            TITLE TEXT,
4            CONTENTID INT,
5            CONTENT TEXT,
```

```
6               FORMATE TEXT
7               FOREIGN KEY(CONTENTID) REFERENCES FEEDBACKTABLE(CONTENTID)
8           );
9
```

8 Queries

8.1 User Interaction

UserID	UserName	ContentID	ContentTitle	ContentType	InteractionHistory
157501	@asiftanjim56	1	Beat Saber	Game	2024-12-17
157502	@hasammahmud71	2	Half-Lyfe	Game	2024-12-17
157503	@nowrenriya12	1	Beat Saber	Game	2024-12-17
157504	@riyadhhaq90	3	VR Chat	Community	2024-12-17
157505	@lamyarahman43	2	Half-Lyfe	Game	2024-12-17
157506	@Alangkarroy78	3	VR Chat	Community	2024-12-17
157507	@asifhassan88	4	The Walking Dead	Game	2024-12-17
157508	@polokhamid001	4	The Walking Dead	Game	2024-12-17
157509	@sheikhasan22	3	VR Chat	Community	2024-12-17
1575010	@mahidhasan112	5	Star Wars	Game	2024-12-17
1575011	@mahmudullah167	6	Hajj	Religious	2024-12-17
1575012	@safayetjabber66	6	Hajj	Religious	2024-12-17
1575013	@tarinhaq69	7	REC-Room	Archietecture	2024-12-17
1575014	@raisaahona113	1	Beat Saber	Game	2024-12-17
1575015	@ferdousmim23	1	Beat Saber	Game	2024-12-17
1575016	@naziatasmin90	7	REC-Room	Archietecture	2024-12-17

Figure 14: User Interactions

```
1  SELECT usertable.UserID, usertable.UserName, vrcontenttable.ContentID,
   vrcontenttable.ContentTitle, vrcontenttable.ContentType, usertable.
   InteractionHistory
2  FROM usertable
3  LEFT JOIN vrcontenttable ON usertable.ContentTitle = vrcontenttable.ContentTitle
4  UNION
5  SELECT usertable.UserID, usertable.UserName, vrcontenttable.ContentID,
   vrcontenttable.ContentTitle, vrcontenttable.ContentType, usertable.
   InteractionHistory
6  FROM vrcontenttable
7  LEFT JOIN usertable ON usertable.ContentTitle = vrcontenttable.ContentTitle;
8
```

8.2 Provides Feedback

UserID	UserName	ContentTitle	FeedbackID	Feedback	FeedbackTime
157501	@asiftanjim56	Beat Saber	230	Good	2024-12-18 13:06:30
157502	@hasammahmud71	Half-Lyfe	231	Average	2024-12-18 13:11:51
157503	@nowrenriya12	Beat Saber	232	Good	2024-12-18 13:11:51
157504	@riyadhhaq90	VR Chat	233	Bad	2024-12-18 13:11:51
157505	@lamyarahman43	Half-Lyfe	234	Good	2024-12-18 13:11:51
157506	@Alangkarroy78	VR Chat	235	Bad	2024-12-18 13:11:51
157507	@asifhassan88	The Walking Dead	236	Good	2024-12-18 13:11:51
157508	@polokhamid001	The Walking Dead	237	Bad	2024-12-18 13:11:51
157509	@sheikhasan22	VR Chat	238	Good	2024-12-18 13:11:51
1575010	@mahidhasan112	Star Wars	239	Good	2024-12-18 13:11:51
1575011	@mahmudullah167	Hajj	240	Good	2024-12-18 13:11:51
1575012	@safayetjabber66	Hajj	241	Good	2024-12-18 13:11:51
1575013	@tarinhaq69	REC-Room	242	Bad	2024-12-18 13:11:51
1575014	@raisaahona113	Beat Saber	243	Good	2024-12-18 13:11:51
1575015	@ferdousmim23	Beat Saber	244	Bad	2024-12-18 13:11:51
1575016	@naziatasmin90	REC-Room	245	Good	2024-12-18 13:11:51

Figure 15: User Feedback

```
1  SELECT usertable.UserID, usertable.UserName, vrcontenttable.ContentTitle,
   feedbacktable.FeedbackID, feedbacktable.Feedback, feedbacktable.FeedbackTime
```

```
    FROM usertable
    INNER JOIN vrcontenttable ON vrcontenttable.ContentTitle = usertable.ContentTitle
    INNER JOIN feedbacktable ON usertable.UserID = feedbacktable.UserID;

```

8.3 Tracking User Interaction

AnalysisID	FeedbackID	UserID	UserName	InteractionDetails	Feedback	InteractionTime
900	230	157501	@asiftanjim56	Abide by Policy	Good	2024-12-18 12:50:12
901	231	157502	@hasammahmud71	Abide by Policy	Average	2024-12-18 12:59:53
902	232	157503	@nowrenriya12	Abide by Policy	Good	2024-12-18 12:59:53
903	233	157504	@riyadhhaq90	Abide by Policy	Bad	2024-12-18 12:59:53
904	234	157505	@lamyarahman43	Abide by Policy	Good	2024-12-18 12:59:53
905	235	157506	@Alangkarroy78	Abide by Policy	Bad	2024-12-18 12:59:53
906	236	157507	@asifhassan88	Abide by Policy	Good	2024-12-18 12:59:53
907	237	157508	@polokhamid001	Abide by Policy	Bad	2024-12-18 12:59:53
908	238	157509	@sheikhasan22	Abide by Policy	Good	2024-12-18 12:59:53
909	239	1575010	@mahidhasan112	Abide by Policy	Good	2024-12-18 12:59:53
910	240	1575011	@mahmudullah167	Abide by Policy	Good	2024-12-18 12:59:53
911	241	1575012	@safayetjabber66	Abide by Policy	Good	2024-12-18 12:59:53
912	242	1575013	@tarinhaq69	Abide by Policy	Bad	2024-12-18 12:59:53
913	243	1575014	@raisaahona113	Abide by Policy	Good	2024-12-18 12:59:53
914	244	1575015	@ferdousmim23	Abide by Policy	Bad	2024-12-18 12:59:53
915	245	1575016	@naziatasmin90	Abide by Policy	Good	2024-12-18 12:59:53

Figure 16: Track User Interaction

```
    SELECT  interactioninfotable.AnalysisID,feedbacktable.FeedbackID,  usertable.
    UserID,usertable.UserName,interactioninfotable.InteractionDetails,feedbacktable.
    Feedback,interactioninfotable.InteractionTime
    FROM usertable
    INNER JOIN feedbacktable ON usertable.UserID = feedbacktable.UserID
    INNER JOIN interactioninfotable ON usertable.UserID=interactioninfotable.UserID;

```

8.4 System and user provided Recommendation

RecommendID	UserID	UserName	FeedbackID	InteractionDetails	RecommendDetails	RecommendTime
800	157501	@asiftanjim56	230	Abide by Policy	User Preference	2024-12-18 13:20:47
801	157502	@hasammahmud71	231	Abide by Policy	User Preference	2024-12-18 13:23:42
802	157503	@nowrenriya12	232	Abide by Policy	User Preference	2024-12-18 13:23:42
803	157504	@riyadhhaq90	233	Abide by Policy	User Preference	2024-12-18 13:23:42
804	157505	@lamyarahman43	234	Abide by Policy	system preferences	2024-12-18 13:23:42
805	157506	@Alangkarroy78	235	Abide by Policy	User Preference	2024-12-18 13:23:42
806	157507	@asifhassan88	236	Abide by Policy	system preferences	2024-12-18 13:23:42
807	157508	@polokhamid001	237	Abide by Policy	User Preference	2024-12-18 13:23:42
808	157509	@sheikhasan22	238	Abide by Policy	User Preference	2024-12-18 13:23:42
809	1575010	@mahidhasan112	239	Abide by Policy	system preferences	2024-12-18 13:23:42
810	1575011	@mahmudullah167	240	Abide by Policy	User Preference	2024-12-18 13:23:42
811	1575012	@safayetjabber66	241	Abide by Policy	User Preference	2024-12-18 13:23:42
812	1575013	@tarinhaq69	242	Abide by Policy	system preferences	2024-12-18 13:23:42
813	1575014	@raisaahona113	243	Abide by Policy	system preferences	2024-12-18 13:23:42
814	1575015	@ferdousmim23	244	Abide by Policy	User Preference	2024-12-18 13:23:42
815	1575016	@naziatasmin90	245	Abide by Policy	User Preference	2024-12-18 13:23:42

Figure 17: System Recommendation

```
    SELECT recommendationtable.RecommendID,
```

```
    usertable.UserID,
    usertable.UserName,
    feedbacktable.FeedbackID,
    interactioninfotable.InteractionDetails,
    recommendationtable.RecommendDetails,
    recommendationtable.RecommendTime
    FROM usertable
    INNER JOIN feedbacktable ON usertable.UserID = feedbacktable.UserID
    INNER JOIN interactioninfotable ON usertable.UserID=interactioninfotable.UserID
    INNER JOIN recommendationtable ON usertable.UserID=recommendationtable.UserID;


```

8.5 Evaluation Of System Attribution

UserID	UserName	InteractionHistory	QA_ID	USER_ATTRIB	Result
157507	@asifhassan88	2024-12-17	220	Scalability	Unsatis...
157506	@Alangkarroy78	2024-12-17	220	Scalability	Unsatis...
157505	@lamyarahman43	2024-12-17	220	Scalability	Unsatis...
157504	@riyadhhaq90	2024-12-17	220	Scalability	Unsatis...
157503	@nowrenriya12	2024-12-17	220	Scalability	Unsatis...
157502	@hasammahmud71	2024-12-17	220	Scalability	Unsatis...
157501	@asiftanjim56	2024-12-17	220	Scalability	Unsatis...
1575016	@naziatasmin90	2024-12-17	219	Security	Satisfied
1575015	@ferdousmim23	2024-12-17	219	Security	Satisfied
1575014	@raisaahona113	2024-12-17	219	Security	Satisfied
1575013	@tarinhaq69	2024-12-17	219	Security	Satisfied
1575012	@safayetjabber66	2024-12-17	219	Security	Satisfied
1575011	@mahmudullah167	2024-12-17	219	Security	Satisfied
1575010	@mahidhasan112	2024-12-17	219	Security	Satisfied
157509	@sheikhasan22	2024-12-17	219	Security	Satisfied
157508	@polokhamid001	2024-12-17	219	Security	Satisfied
157507	@asifhassan88	2024-12-17	219	Security	Satisfied
157506	@Alangkarroy78	2024-12-17	219	Security	Satisfied
157505	@lamyarahman43	2024-12-17	219	Security	Satisfied

Figure 18: System Attribution

```
select distinct usertable.UserID,usertable.UserName,usertable.InteractionHistory,
 quality_assuarance.QA_ID,quality_assuarance.USER_ATTRIB,quality_assuarance.Result
 from usertable
 cross join quality_assuarance

```

8.6 User Device Usage

UserID	UserName	ContentTitle	InteractionHistory	device_id	device_type	compatibility
157501	@asiftanjim56	Beat Saber	2024-12-17	1025	Apple	NO
157501	@asiftanjim56	Beat Saber	2024-12-17	1024	Android	NO
157501	@asiftanjim56	Beat Saber	2024-12-17	1023	Linux	YES
157501	@asiftanjim56	Beat Saber	2024-12-17	1022	MAC	YES
157501	@asiftanjim56	Beat Saber	2024-12-17	1021	Windows	YES
157502	@hasammahmud71	Half-Lyfe	2024-12-17	1025	Apple	NO
157502	@hasammahmud71	Half-Lyfe	2024-12-17	1024	Android	NO
157502	@hasammahmud71	Half-Lyfe	2024-12-17	1023	Linux	YES
157502	@hasammahmud71	Half-Lyfe	2024-12-17	1022	MAC	YES
157502	@hasammahmud71	Half-Lyfe	2024-12-17	1021	Windows	YES
157503	@nowrenriya12	Beat Saber	2024-12-17	1025	Apple	NO
157503	@nowrenriya12	Beat Saber	2024-12-17	1024	Android	NO
157503	@nowrenriya12	Beat Saber	2024-12-17	1023	Linux	YES
157503	@nowrenriya12	Beat Saber	2024-12-17	1022	MAC	YES
157503	@nowrenriya12	Beat Saber	2024-12-17	1021	Windows	YES
157504	@riyadhhaq90	VR CHAT	2024-12-17	1025	Apple	NO
157504	@riyadhhaq90	VR CHAT	2024-12-17	1024	Android	NO
157504	@riyadhhaq90	VR CHAT	2024-12-17	1023	Linux	YES
157504	@riyadhhaq90	VR CHAT	2024-12-17	1022	MAC	YES

Figure 19: User Device with Compatability

```
1   select distinct *
2    from usertable
3    cross join device
4
```

8.7 User Community

userID	community_id	UserName	Description_user
157501	100	@asiftanjim56	Lead Attributor
157502	101	@hasammahmud71	Lead Coordinator
157503	102	@nowrenriya12	Lead Communicator
157504	103	@riyadhhaq90	Lead Attributor
157505	104	@lamyarahman43	Lead Coordinator
157506	105	@Alangkarroy78	Lead Communicator
157507	106	@asifhassan88	Lead Attributor
157508	107	@polokhamid001	Lead Attributor
157509	108	@sheikhasan22	Lead Attributor
1575010	109	@mahidhasan112	Lead Communicator
1575011	110	@mahmudullah167	Lead Attributor
1575012	111	@safayetjabber66	Lead Communicator
1575013	112	@tarinhaq69	Lead Attributor
1575014	113	@raisaahona113	Lead Attributor
1575015	114	@ferdousmim23	Lead Communicator
1575016	115	@naziatasmin90	Lead Communicator

Figure 20: User Community

```
1    select usertable.userID,community.community_id,usertable.UserName,community.
    Description_user
2    from usertable
3    inner join community on community.userID = usertable.UserID
4
```

8.8 User Tutorial

UserID	T_id	UserName	title	formate	InteractionHistory
157501	1200	@asiftanjim56	Tutorial for Beat Saber	Game	2024-12-17
157502	1201	@hasammahmud71	Tutorial for Half-Lyfe	Game	2024-12-17
157503	1200	@nowrenriya12	Tutorial for Beat Saber	Game	2024-12-17
157504	1202	@riyadhhaq90	Tutorial for VR Chat	Community	2024-12-17
157505	1201	@lamyarahman43	Tutorial for Half-Lyfe	Game	2024-12-17
157506	1202	@Alangkarroy78	Tutorial for VR Chat	Community	2024-12-17
157507	1203	@asifhassan88	Tutorial for The Walking Dead	Game	2024-12-17
157508	1203	@polokhamid001	Tutorial for The Walking Dead	Game	2024-12-17
157509	1202	@sheikhasan22	Tutorial for VR Chat	Community	2024-12-17
1575010	1204	@mahidhasan112	Tutorial for Star Wars	Game	2024-12-17
1575011	1205	@mahmudullah167	Tutorial for Hajj	Religius	2024-12-17
1575012	1205	@safayetjabber66	Tutorial for Hajj	Religius	2024-12-17
1575013	1206	@tarinhaq69	Tutorial for REC-Room	Architecture	2024-12-17
1575014	1200	@raisaahona113	Tutorial for Beat Saber	Game	2024-12-17
1575015	1200	@ferdousmim23	Tutorial for Beat Saber	Game	2024-12-17
1575016	1206	@naziatasmin90	Tutorial for REC-Room	Architecture	2024-12-17

Figure 21: User Tutorial

```
1    select usertable.UserID,tutorial.T_id, usertable.UserName,tutorial.title,tutorial
    .formate,usertable.InteractionHistory
2    from usertable
3    inner join vrcontenttable on usertable.ContentTitle=vrcontenttable.ContentTitle
4    inner join tutorial on vrcontenttable.ContentID=tutorial.contentID
5
```

8.9 User Security

UserID	S_id	UserName	ContentTitle	protocol	Description_tx	priyority	InteractionHistory
157501	4508	@asiftanjim56	Beat Saber	OAuth	Open Authorization	High	2024-12-17
157501	4506	@asiftanjim56	Beat Saber	SSH	Secure Shell	High	2024-12-17
157501	4504	@asiftanjim56	Beat Saber	HTTPS	HyperText Transfer Protocol Secure	High	2024-12-17
157501	4502	@asiftanjim56	Beat Saber	SSL	Secure Socket Layer	High	2024-12-17
157501	4500	@asiftanjim56	Beat Saber	IPsec	Internet Protocol Securuity	High	2024-12-17
157502	4508	@hasammahmud71	Half-Lyfe	OAuth	Open Authorization	High	2024-12-17
157502	4506	@hasammahmud71	Half-Lyfe	SSH	Secure Shell	High	2024-12-17
157502	4504	@hasammahmud71	Half-Lyfe	HTTPS	HyperText Transfer Protocol Secure	High	2024-12-17
157502	4502	@hasammahmud71	Half-Lyfe	SSL	Secure Socket Layer	High	2024-12-17
157502	4500	@hasammahmud71	Half-Lyfe	IPsec	Internet Protocol Securuity	High	2024-12-17
157503	4508	@nowrenriya12	Beat Saber	OAuth	Open Authorization	High	2024-12-17
157503	4506	@nowrenriya12	Beat Saber	SSH	Secure Shell	High	2024-12-17
157503	4504	@nowrenriya12	Beat Saber	HTTPS	HyperText Transfer Protocol Secure	High	2024-12-17
157503	4502	@nowrenriya12	Beat Saber	SSL	Secure Socket Layer	High	2024-12-17
157503	4500	@nowrenriya12	Beat Saber	IPsec	Internet Protocol Securuity	High	2024-12-17
157504	4508	@riyadhhaq90	VR CHAT	OAuth	Open Authorization	High	2024-12-17
157504	4506	@riyadhhaq90	VR CHAT	SSH	Secure Shell	High	2024-12-17
157504	4504	@riyadhhaq90	VR CHAT	HTTPS	HyperText Transfer Protocol Secure	High	2024-12-17
157504	4502	@riyadhhaq90	VR CHAT	SSL	Secure Socket Layer	High	2024-12-17

Figure 22: User Security

```
1    select distinct usertable.UserID, security_table.S_id,usertable.UserName,
    usertable.ContentTitle,security_table.protocol,security_table.Description_tx,
    security_table.priyority,usertable.InteractionHistory
2    from usertable
3    cross join security_table
4    where security_table.priyority = 'High'
5
```

9 Conclusions

The Enhanced Virtual Reality Experience Platform (EVREP) successfully addresses the need for an advanced system to manage VR experiences, user interactions, feedback, and personalized recommendations efficiently. By incorporating real-time data analytics, interactive tutorials, and community features, the platform ensures both adaptability and engagement for VR enthusiasts, developers, and researchers. The system's emphasis on device compatibility, accessibility, cloud integration, and sustainability makes it versatile and inclusive. Security measures further ensure user privacy and data protection.EVREP not only enhances user satisfaction by offering tailored VR content but also fosters continuous improvement through interaction analysis and feedback integration. By delivering a scalable, reliable, and user-friendly platform, EVREP stands poised to transform the way users experience and interact with virtual reality.This project demonstrates a successful combination of technical innovation, user-centric design, and strategic implementation, achieving the goal of delivering immersive, personalized, and efficient VR experiences

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