

Sri Lanka Institute of Information Technology



Assignment 1

MLB\_02.01\_12

## Online Educational Games

2021

**Information Systems and Data Modeling– IT1090**

B.Sc. (Hons) in Information Technology

## Group Details

Group Number: MLB\_02.01\_12

Project Title: Online Educational Games

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# 1.0 INTRODUCTION

Online educational games (OEGPlay) website is a virtual platform where it provides the opportunity to learn through games for children. Nowadays children have used to play games more than the early kids so providing an educational help through games will be a trick to make them interest on learning subjects. This platform helps the child to learn and play at the same time in a place convenient to the user. User do not need to go on an installation process to play games as this is a system operates on a website via the internet.

System provides the fundamental knowledge to a child on relevant subjects according to their grade. Subjects available are differ from some grade to grade. Subjects like English, Science, Mathematics, Environmental studies are some in general. It is not mandatory for the user to pay and play games as the system has provide an option to play free games by becoming a free member where there is no need of any payments. The system allows a new viewer to view the website and get an idea except playing games. The main objective of the website is to provide the best educational support to the children while having fun on playing games, progress them on subjects and make them interest in education. The guardian of the child or child itself can see the progression in relevant subjects as there will be a score board and ranks given from the system to make children more interest and curious on playing educational games and learning through it.

## 2.0 HYPOTHETICAL SCENARIO

The online educational games website has three types of users as guest, free member and premium member who can use the system and play games. A guest should get register by clicking on sign up button and become a preferred member to start playing games. The two types of memberships are the free membership and premium membership. Guest can become a free member without doing any payments and also can straightly become a premium member by doing the payments after getting registered. System allows the guest only to view the website, but the free or premium members can view and start using the system after signing into their accounts by clicking the sign in button.

After the guest gets registered and become members or existing members logged in to the existing accounts, these members can start playing games from that instance. System allows to play in different ways to the two type of members. If it is a free member there will be some limited free games available to play for free forever. Else if it is a premium member then there will be no any restrictions since premium members can play any games that are available in the website including the premium games. If the member wants to find games for a specific subject, go to the subject page and choose whatever the subject according to the preference. Or the member can go directly to the games page and use the filter on the left side. Also, via filter, the member can select the grade and category of the game. The member can find the total score, current rank, and game history via the dashboard.

On the subscription page, the user can see their current subscription. If the user is a free member, they can easily upgrade to the premium membership at any time via the subscription page. If the user is already a premium member, they can cancel the subscription with just a single click. On the settings page, the user can change their name, email, and password.

## 3.0 REQUIREMENT ANALYSIS

### 3.1 MAIN REQUIREMENTS

#### **Functional requirements**

Functional requirements describe the main functions of the website and also define what the users and system are supposed to do. There are five users who use the online educational games website (OEGPlay). They are Guest, Free member, Premium member, Administrator and Developer. These users can access the website through different areas relevant to them.

#### **1. Guest, Free member, Premium member (can access the front end of the system)**

User requirements –

- Guest can register to the system by providing the necessary user credentials asked for
- Guest can choose a preferred membership type
- Registration: guest can register to the system and choose a preferred membership type to become a free or a premium member
- Free member and premium member must enter accurate login credentials to login to the system
- Free member and premium member can edit their profiles
- Free member and premium member can delete their accounts whenever they want
- Free member and premium member can browse, search and filter games
- Free member can upgrade the membership to a premium member
- Free member should complete the payments via credit/debit card, mobile wallet or PayPal to do a upgrade in membership
- Free member can play free games which are available to the free membership holders
- Premium member can play premium games or any kind of games available in the website
- Premium member can cancel the membership
- Premium member can renew the membership by doing necessary payments
- Free member and premium member can obtain scores and ranks
- Free member and premium member can give feedbacks and review about the website and services provided

- Free member and premium member can contact the team of the website through shown social medias
- Free member and premium member can select any preferred subject to play the game through home page or directly from subjects page

#### System requirements –

- System needs to store all the details of the members according to their membership type
- System is opened for new registrations
- System should display sign in/sign up pages
- System should validate the login credentials
- System should notify a successful or an error message after the validation
- System should display the home page and any other pages requested by the user which are allowed to the user to access
- System allows the user to make changes in the user profile
- System needs to store payment details and check validity of them
- System should delete the details from the database of a deleted account
- System needs to connect with the social medias accessible and display the relevant details
- System should display the games page of a subject which is selected by the user

## **2. Administrator (can access the back end of the system)**

#### User requirements –

- Administrator signs into the website by providing required login credentials
- Administrator can view both the member and income statistics
- Administrator can add new games to the website
- Administrator can handle existing games by modifying or deleting the games
- Administrator can delete members
- Administrator can retrieve member details of members whose payments are overdue
- Administrator can downgrade the membership or modify member accounts according to the retrieved details of the members
- Administrator checks member feedbacks and reviews
- Administrator helps to solve problems of the members

System requirements –

- System should validate the user login credentials
- System should store member and income statistics
- System should store details of the specific games existing and added
- System should delete details of the deleted games by the user
- System should delete details of the members deleted by the user
- System should update the details of the downgraded memberships and modified accounts in the database
- System stores the member feedbacks and reviews and display them
- System stores the problems asked by the members

### **3. Developer (can access the back end of the system)**

User requirements –

- Developer signs into the website by entering login credentials
- Developer can develop new games to the website
- Developer can fix bugs founded in the existing games
- Developer can update the website and games

System requirements –

- System validates user login credentials
- System notifies any bugs founded in the existing games
- System updates the games where the bugs are fixed
- System allows for new update



# **Non-Functional requirements**

A non-functional requirement will describe how a system should behave and what limits there are on its functionality. These non-functional requirements are also more important to the system. If we couldn't find these features, sometime system may be useless. These non- functions are depending on the system features.

## **Availability**

- The system should be available in 24/7.

## **Performance**

- Admin can add/edit/remove/update properties
- Any number of users can be able to access the system at the same time and the response of the system regarding to the user requests to the user requests will be very high.

## **Speed**

- Must have good internet speed.
- System does not allow for any delays.
- Can access more users same time without any blocking.

## **Capacity**

- System should have the capability to store all the data functions that the members need.
- The computer must have good capacity.

## **Reliability**

- The system should detect the invalid user credentials if the customer inputs invalid entries into a reservation request form.
- The confidentiality of member information must be maintained.

## **User friendly**

- Even newly registered user can use the system without any hesitations due to the system user friendliness.

## **Security**

- Secure the system from unauthorized access and the system database can only access directly by the admin.
- Also, by providing unique user ID and password, no one can access the system by any other's user ID and password.

## 3.2 DATA REQUIREMENTS

### ❖ Member

- memberID
- username
- firstName
- lastName
- m\_password
- m\_rank
- email

### ❖ Administrator

- adminID
- username
- firstName
- lastName
- a\_password
- email

### ❖ Contact

- contactID
- name
- email
- subject
- description
- c\_datetime
- view\_datetime

### ❖ Review

- RID
- comment
- submit\_date

### ❖ Type

- TID
- mType
- price
- description

### ❖ Membership

- MID
- m\_plan
- m\_status
- start\_date

### ❖ Payment

- PID
- p\_description
- amount
- p\_datetime

❖ **Game**

- gameId
- gameName
- gameDescription
- gameInstructions
- gameAccess
- last\_modified\_date
- added\_date

❖ **Developer**

- devID
- devFirstName
- devLastName
- description
- email

❖ **Subject**

- SID
- subjectName
- subjectDescription

❖ **Grade**

- GID
- gradeName
- gradeDescription

❖ **Category**

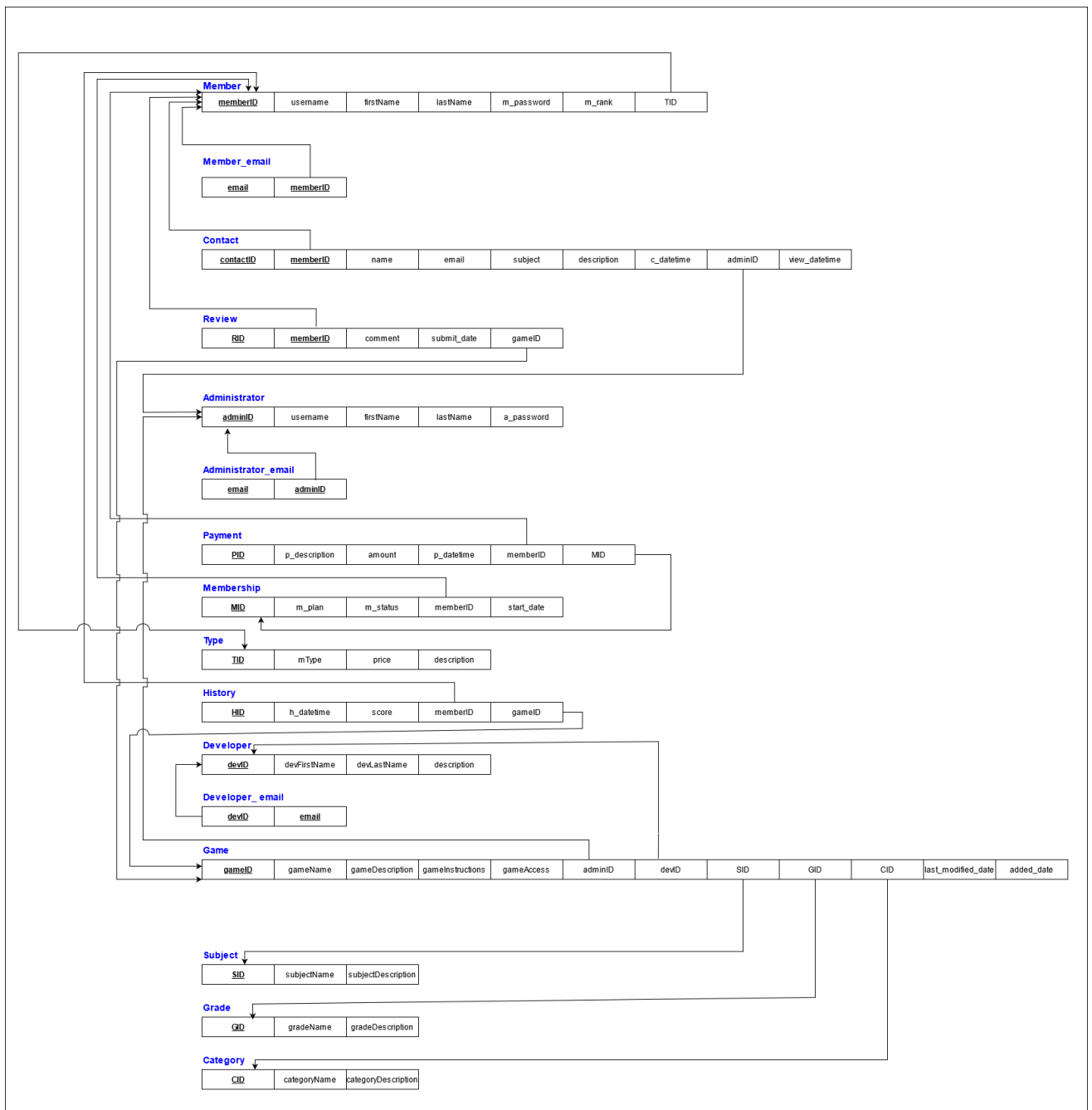
- CID
- categoryName
- categoryDescription

❖ **History**

- HID
- h\_datetime
- score

**Assumptions -** As Membership subscription is renewed yearly or monthly, one member will be doing many payments.  
As Type, it has free and premium two categorized membership types

# 5.0 RELATIONAL SCHEMA



## 6.0 SQL QUERIES TO CREATE THE DATA BASE

```
/*Type Table*/
CREATE TABLE Type
(
    TID INT NOT NULL IDENTITY(1, 1),
    mType VARCHAR(30) NOT NULL,
    price FLOAT NOT NULL,
    description VARCHAR(500),

    CONSTRAINT PK_Type PRIMARY KEY (TID)
)

/*Member Table*/
CREATE TABLE Member
(
    memberID INT NOT NULL IDENTITY(1, 1),
    username VARCHAR(128) NOT NULL,
    firstName CHAR(128) NOT NULL,
    lastName CHAR(128) NOT NULL,
    m_password VARCHAR(256) NOT NULL,
    m_rank CHAR(20) NOT NULL DEFAULT 'No Rank',
    TID INT NOT NULL,

    CONSTRAINT PK_Member PRIMARY KEY (memberID),
    CONSTRAINT FK_Member FOREIGN KEY (TID) REFERENCES Type (TID)
)

CREATE TABLE Member_email
(
    memberID INT NOT NULL,
    email VARCHAR(128) NOT NULL,

    CONSTRAINT PK_MemberEmail PRIMARY KEY (memberID,email),
    CONSTRAINT FK_MemberEmail FOREIGN KEY (memberID) REFERENCES Member (memberID)
)

/*Administrator Table*/
CREATE TABLE Administrator
(
    adminID INT NOT NULL IDENTITY(1, 1),
    username VARCHAR(128) NOT NULL,
    firstName CHAR(128) NOT NULL,
    lastName CHAR(128) NOT NULL,
    a_password VARCHAR(256) NOT NULL,

    CONSTRAINT PK_Administrator PRIMARY KEY (adminID)
)

CREATE TABLE Administrator_email
(
    adminID INT NOT NULL,
    email VARCHAR(128) NOT NULL,

    CONSTRAINT PK_AdministratorEmail PRIMARY KEY (adminID,email),
    CONSTRAINT FK_AdministratorEmail FOREIGN KEY (adminID) REFERENCES Administrator
(adminID)
)
```

```

/*Developer Table*/
CREATE TABLE Developer
(
    devID INT NOT NULL IDENTITY(1, 1),
    devFirstName CHAR(128) NOT NULL,
    devLastName CHAR(128) NOT NULL,
    description VARCHAR(512),

    CONSTRAINT PK_Developer PRIMARY KEY (devID)
)
CREATE TABLE Developer_email
(
    devID INT NOT NULL,
    email VARCHAR(128) NOT NULL,

    CONSTRAINT PK_DeveloperEmail PRIMARY KEY (devID,email),
    CONSTRAINT FK_DeveloperEmail FOREIGN KEY (devID) REFERENCES Developer (devID)
)

/*Subject Table*/
CREATE TABLE Subject
(
    SID INT NOT NULL IDENTITY(1, 1),
    subjectName VARCHAR(128) NOT NULL,
    subjectDescription VARCHAR(512),

    CONSTRAINT PK_Subject PRIMARY KEY (SID)
)

/*Grade Table*/
CREATE TABLE Grade
(
    GID INT NOT NULL IDENTITY(1, 1),
    gradeName VARCHAR(128) NOT NULL,
    gradeDescription VARCHAR(512),

    CONSTRAINT PK_Grade PRIMARY KEY (GID)
)

/*Category Table*/
CREATE TABLE Category
(
    CID INT NOT NULL IDENTITY(1, 1),
    categoryName VARCHAR(128) NOT NULL,
    categoryDescription VARCHAR(512),

    CONSTRAINT PK_Category PRIMARY KEY (CID)
)

/*Game Table*/
CREATE TABLE Game
(
    gameID INT NOT NULL IDENTITY(1, 1),
    gameName VARCHAR(128) NOT NULL,
    gameDescription VARCHAR(1024),
    gameInstructions VARCHAR(1024),
    gameAccess CHAR(10) NOT NULL,
    adminID INT NOT NULL,
    devID INT NOT NULL,

```

```

GID INT NOT NULL,
CID INT NOT NULL,
SID INT NOT NULL,
last_modified_date DATE NOT NULL,
added_date DATE NOT NULL,

CONSTRAINT PK_Game PRIMARY KEY (gameID),
CONSTRAINT FK_Game1 FOREIGN KEY (GID) REFERENCES Grade (GID),
CONSTRAINT FK_Game2 FOREIGN KEY (CID) REFERENCES Category (CID),
CONSTRAINT FK_Game3 FOREIGN KEY (SID) REFERENCES Subject (SID),
CONSTRAINT FK_Game4 FOREIGN KEY (adminID) REFERENCES Administrator (adminID),
CONSTRAINT FK_Game5 FOREIGN KEY (devID) REFERENCES Developer (devID)
)

/*Membership Table*/
CREATE TABLE Membership
(
    MID INT NOT NULL IDENTITY(1, 1),
    memberID INT NOT NULL,
    m_plan VARCHAR(20) NOT NULL,
    m_status VARCHAR(20) NOT NULL,
    start_date DATE NOT NULL,
    renewal_date DATE NOT NULL,

    CONSTRAINT PK_Membership PRIMARY KEY (MID),
    CONSTRAINT FK_Membership1 FOREIGN KEY (memberID) REFERENCES Member (memberID),
)

/*Payment Table*/
CREATE TABLE Payment
(
    PID INT NOT NULL IDENTITY(1, 1),
    memberID INT NOT NULL,
    p_datetime DATETIME NOT NULL,
    amount FLOAT NOT NULL,
    p_description VARCHAR(128),
    MID INT NOT NULL,

    CONSTRAINT PK_Payment PRIMARY KEY (PID),
    CONSTRAINT FK_Payment1 FOREIGN KEY (memberID) REFERENCES Member (memberID),
    CONSTRAINT FK_Payment2 FOREIGN KEY (MID) REFERENCES Membership (MID)
)

/*History Table*/
CREATE TABLE History
(
    HID INT NOT NULL IDENTITY(1, 1),
    memberID INT NOT NULL,
    gameID INT NOT NULL,
    h_datetime DATETIME NOT NULL,
    score INT not NULL,

    CONSTRAINT PK_History PRIMARY KEY (HID),
    CONSTRAINT FK_History1 FOREIGN KEY (memberID) REFERENCES Member (memberID),
    CONSTRAINT FK_History2 FOREIGN KEY (gameID) REFERENCES Game (gameID)
)

```



```

/*Contact Table*/
CREATE TABLE Contact
(
    contactID INT NOT NULL IDENTITY(1, 1),
    memberID INT NOT NULL,
    name CHAR(128) NOT NULL,
    subject VARCHAR(128) NOT NULL,
    email VARCHAR(128) NOT NULL,
    description VARCHAR(1000),
    c_datetime DATETIME NOT NULL,
    adminID INT NOT NULL,
    view_datetime DATETIME NOT NULL,

    CONSTRAINT PK_Contact PRIMARY KEY (ContactID,memberID),
    CONSTRAINT FK_Contact1 FOREIGN KEY (memberID) REFERENCES Member (memberID),
    CONSTRAINT FK_Contact2 FOREIGN KEY (adminID) REFERENCES Administrator (adminID)
)

/*Review Table*/
CREATE TABLE Review
(
    RID INT NOT NULL IDENTITY(1, 1),
    memberID INT NOT NULL,
    gameID INT NOT NULL,
    comment VARCHAR(200),
    submit_date DATE NOT NULL,

    CONSTRAINT PK_Review PRIMARY KEY (RID,memberID),
    CONSTRAINT FK_Review1 FOREIGN KEY (memberID) references Member (memberID),
    CONSTRAINT FK_Review2 FOREIGN KEY (gameID) references Game (gameID)
)

/*Insert Data to Type Table*/
INSERT INTO Type VALUES ('Premium', 9.99, 'Premium Membership');
INSERT INTO Type VALUES ('Free', 0, 'Free Membership');

/*Insert Data to Member Table*/
INSERT INTO Member VALUES ('Akila123', 'Akila', 'Liyanage',
    HASHBYTES('SHA2_256','Akila123'), 'Gold', 1);
INSERT INTO Member VALUES ('Rusiru99', 'Supun', 'Rusiru',
    HASHBYTES('SHA2_256','Rusiru((123)', 'Silver', 1);
INSERT INTO Member VALUES ('PramithaWeerasinghe', 'Pramitha', 'Weerasinghe',
    HASHBYTES('SHA2_256','AzPramitha1203'), 'No Rank', 1);
INSERT INTO Member VALUES ('ThusharaX', 'Thushara', 'Thiwanka',
    HASHBYTES('SHA2_256','ThusharaX1997'), 'Platinum', 1);
INSERT INTO Member VALUES ('GaweenKanishka97', 'Gaween', 'Kanishka',
    HASHBYTES('SHA2_256','GaweenKani980421'), 'Legend', 1);

INSERT INTO Member_email VALUES (1, 'akilaliyanage@gmail.com');
INSERT INTO Member_email VALUES (2, 'supunrusiru@gmail.com');
INSERT INTO Member_email VALUES (3, 'pramitha99@gmail.com');
INSERT INTO Member_email VALUES (4, 'thusharax@gmail.com');
INSERT INTO Member_email VALUES (5, 'gaweenkanishka98@gmail.com');

/*Insert Data to Administrator Table*/
INSERT INTO Administrator VALUES ('pasindulakshan','Pasindu', 'Lakshan',
    HASHBYTES('SHA2_256','Pasindu123'));

```

```

INSERT INTO Administrator VALUES ('lahirugayashan', 'Gayashan', 'Lahiru',
HASHBYTES('SHA2_256', 'lahiru@9828'));
INSERT INTO Administrator VALUES ('anjaleebimalsha', 'Anjalee', 'Bimalsha',
HASHBYTES('SHA2_256', 'bimalsha@20$$'));
INSERT INTO Administrator VALUES ('nethmitharu', 'Nethmini', 'Tharuka',
HASHBYTES('SHA2_256', 'NethmiT!@4'));
INSERT INTO Administrator VALUES ('chamrumi', 'Chamodya', 'Rumindi',
HASHBYTES('SHA2_256', 'Rumi213@!#4'));

INSERT INTO Administrator_email VALUES (1, 'u@my.sliit.lk');
INSERT INTO Administrator_email VALUES (2, 'u@my.sliit.lk');
INSERT INTO Administrator_email VALUES (3, 'u@my.sliit.lk');
INSERT INTO Administrator_email VALUES (4, 'u@my.sliit.lk');
INSERT INTO Administrator_email VALUES (5, 'u@my.sliit.lk');

/*Insert Data to Developer Table*/
INSERT INTO Developer VALUES ('Pasindu', 'Lakshan', 'Game Developer');
INSERT INTO Developer VALUES ('Lahiru', 'Gayashan', 'Game Developer');
INSERT INTO Developer VALUES ('Anjalee', 'Bimalsha', 'Game Developer');
INSERT INTO Developer VALUES ('Nethmini', 'Tharuka', 'Game Developer');
INSERT INTO Developer VALUES ('Chamodya', 'Rumindi', 'Game Developer');

INSERT INTO Developer_email VALUES (1, 'u@my.sliit.lk');
INSERT INTO Developer_email VALUES (2, 'u@my.sliit.lk');
INSERT INTO Developer_email VALUES (3, 'u@my.sliit.lk');
INSERT INTO Developer_email VALUES (4, 'u@my.sliit.lk');
INSERT INTO Developer_email VALUES (5, 'u@my.sliit.lk');

/*Insert Data to Subject Table*/
INSERT INTO Subject VALUES ('English', 'Learn English while playing games');
INSERT INTO Subject VALUES ('Mathematics', 'Our online math games are designed to
provide kids with multiple opportunities to understand the power and beauty of
math. ');
INSERT INTO Subject VALUES ('Science', 'Learn Science while playing these awesome
games');
INSERT INTO Subject VALUES ('History', 'Learn History while playing games');
INSERT INTO Subject VALUES ('Environment', 'Learn Environment while playing games. ');

/*Insert Data to Grade Table*/
INSERT INTO Grade VALUES ('Preschool', 'Games for Preschool kids');
INSERT INTO Grade VALUES ('Grade 1', 'Games for grade 1 students');
INSERT INTO Grade VALUES ('Grade 2', 'Games for grade 2 students');
INSERT INTO Grade VALUES ('Grade 3', 'Games for grade 3 students');
INSERT INTO Grade VALUES ('Grade 4', 'Games for grade 4 students');
INSERT INTO Grade VALUES ('Grade 5', 'Games for grade 5 students');
INSERT INTO Grade VALUES ('Grade 6', 'Games for grade 6 students');
INSERT INTO Grade VALUES ('Grade 7', 'Games for grade 7 students');
INSERT INTO Grade VALUES ('Grade 8', 'Games for grade 8 students');
INSERT INTO Grade VALUES ('Grade 9', 'Games for grade 9 students');

/*Insert Data to Category Table*/
INSERT INTO Category VALUES ('Quiz', 'Quiz games');
INSERT INTO Category VALUES ('Puzzle', 'Puzzle games');

/*Insert Data to Game Table*/
INSERT INTO Game VALUES ('Bingo Additions', 'Bingo Addition Game is an educational &
interactive way to learn addition online.', 'Clicks the start now button. then follow
the on-screen instructions', 'Free', 1, 1, 2, 1, 1, '2021-05-15', '2021-04-25');
INSERT INTO Game VALUES ('Multiplication Race', 'Practice your multiplication skills
with this awesome game', 'Clicks the start now button. then follow the on-screen
instructions', 'Free', 2, 2, 1, 2, 4, '2021-05-15', '2021-04-25');

```

```

INSERT INTO Game VALUES ('Active Passive', 'Best way learn how to convert Active voice
to Passive Voice', 'Clicks the start now button. then follow the on-screen
instructions', 'Premium', 3, 3, 10, 2, 1, '2021-05-15', '2021-04-25');
INSERT INTO Game VALUES ('Find Synonyms', 'This game teaches synonyms. Learn Synonyms
while having fun', 'Clicks the start now button. then follow the on-screen
instructions', 'Free', 4, 4, 3, 1, 1, '2021-05-15', '2021-04-25');
INSERT INTO Game VALUES ('Measuring Matter', 'learn about the various tools and units
of measuring matter', 'Clicks the start now button. then follow the on-screen
instructions', 'Premium', 5, 5, 6, 1, 3, '2021-05-15', '2021-04-25');

/*Insert Data to Membership Table*/
INSERT INTO Membership VALUES (1, 'Monthly', 'Active', '2021-02-16', '2021-05-16');
INSERT INTO Membership VALUES (2, 'Monthly', 'Active', '2021-02-16', '2021-05-16');
INSERT INTO Membership VALUES (3, 'Annual', 'Active', '2021-03-21', '2022-03-21');
INSERT INTO Membership VALUES (4, 'Monthly', 'Active', '2021-04-11', '2021-06-11');
INSERT INTO Membership VALUES (5, 'Monthly', 'Active', '2021-03-18', '2021-06-18');

/*Insert Data to Payment Table*/
INSERT INTO Payment VALUES (1, '2021-04-25 18:56:33', 99.00, 'via Paypal', 1);
INSERT INTO Payment VALUES (2, '2021-04-01 12:11:21', 9.99, 'via Payhere', 2);
INSERT INTO Payment VALUES (3, '2021-04-05 22:23:11', 29.99, 'via Paypal', 3);
INSERT INTO Payment VALUES (4, '2021-03-21 16:12:23', 65.00, 'via Paypal', 4);
INSERT INTO Payment VALUES (5, '2021-04-12 08:33:45', 18.00, 'via Payhere', 5);

/*Insert Data to History Table*/
INSERT INTO History VALUES (1, 2, '2021-04-25 18:56:33', 2345);
INSERT INTO History VALUES (2, 3, '2021-04-25 18:56:33', 2344);
INSERT INTO History VALUES (3, 4, '2021-04-25 18:56:33', 1123);
INSERT INTO History VALUES (4, 1, '2021-04-25 18:56:33', 233);
INSERT INTO History VALUES (5, 5, '2021-04-25 18:56:33', 123);

/*Insert Data to Contact Table*/
INSERT INTO Contact VALUES
(
    1,
    'Akila Liyanage',
    'Grade 3 games are too easy',
    'akilaliyanage@gmail.com',
    'The quizzes available for the grade 3 students were a bit easy...It will be
better if you could add more competitive quizzes to the website',
    '2021-04-12 12:21:23',
    1,
    '2021-04-12 18:56:33'
);
INSERT INTO Contact VALUES
(
    2,
    'Supun Rusiru',
    'Requesting games on sinhala language',
    'supunrusiru@gmail.com',
    'I am a student studying in sinhala medium. I request it will be much more
better if this website could provide games with sinhala language option as it could be
more reliable in understanding the question easily.',
    '2021-04-15 08:34:12',
    1,
    '2021-04-15 22:12:34'
);
INSERT INTO Contact VALUES
(
    3,
    'Pramitha W',
    'Popping up many advertisements',

```

```

        'pramitha99@gmail.com',
        'Website displays soo many advertisements. They get pop up while playing the
games. Please reduce this popping up of advertisements while playing as it is
difficult to keep the attention on the game.',
        '2021-04-18 22:05:11',
        1,
        '2021-04-18 23:42:23'
);
INSERT INTO Contact VALUES
(
        4,
        'Thushara Thiwanka',
        'Requesting games for Information Techonology', 'thusharax@gmail.com',
        'I notice that there no games about ICT on this website. if you guys can
develop some games about ICT subject it will be very useful for many students.',
        '2021-04-22 19:12:23',
        4,
        '2021-04-22 21:34:11'
);
INSERT INTO Contact VALUES
(
        5,
        'Gawen Kanishka',
        'Premium Member Issue',
        'gaweenkanishka98@gmail.com',
        'I join this site as a premium member. But when I paid with my Visa card, I
did not get the security code I needed. Tried two or three times but it did not work.
Why is that?',
        '2021-04-25 14:21:45',
        2,
        '2021-04-25 18:23:23'
);

/*Insert Data to Review Table*/
INSERT INTO Review VALUES (1, 2, 'I love this game. It is very enjoyable, fun and mind-
racking.', '2021-04-01');
INSERT INTO Review VALUES (2, 3, 'This game is amazing. It is totally perfect for kids
to learn new things.', '2021-04-08');
INSERT INTO Review VALUES (3, 4, 'Wow! What a fantastic game.this is kids friendly
game.I like this game.Keep it up!', '2021-04-16');
INSERT INTO Review VALUES (4, 1, 'Please add more games for higher students as
well', '2021-05-21');
INSERT INTO Review VALUES (5, 5, 'This quiz game is very helpful to improve our
knowledge and I have played this quiz lot of times and I really like it.', '2021-05-
24');

```

## 7.0 PERFORMANCE CONSIDERATION

Performance requirements in a system plays a major role. Some of the main considerations done by the system are as follows:

- The system must be operated 24 hours a day for a register user to access the system at any time, and the user should be able to access the games without any interruption.
- Registered members can access the system numerous times by providing their login credentials
- Premium members can play any game available on the website without any interruption.
- Login process must be below 3 seconds.
- Game loading time must be below 30 seconds.
- Free members can play only free games.
- Administrator can manage the members and member accounts.
- Administrator can handle existing games on the website.
- Administrator can reply to member feedbacks.
- Developer can develop new games to the website.
- Developer can update the system.
- Developer needs to detect bugs and fix them as soon as possible.

## 8.0 SECURITY CONSIDERATION

- Only the administrators are allowed to access and modify the data on this website.
- When users leave the game, information about the state of users' session is saved.
- Only one user account possible to creates with an email account.
- The password of user account should be a strength password which is a combination of uppercase letters, lowercase letters, numbers, and special characters.
- The database must have a backup of all the data in the system for security.