Dance Scool Web Site

Dans School Web Site

We will design a website for a dance school that offers sporty salsa, bachata, children's dances, private lessons, kpop, hip-hop and modern dance activities, where we will perform students' registration system for classes, payments to teachers and profit calculations.

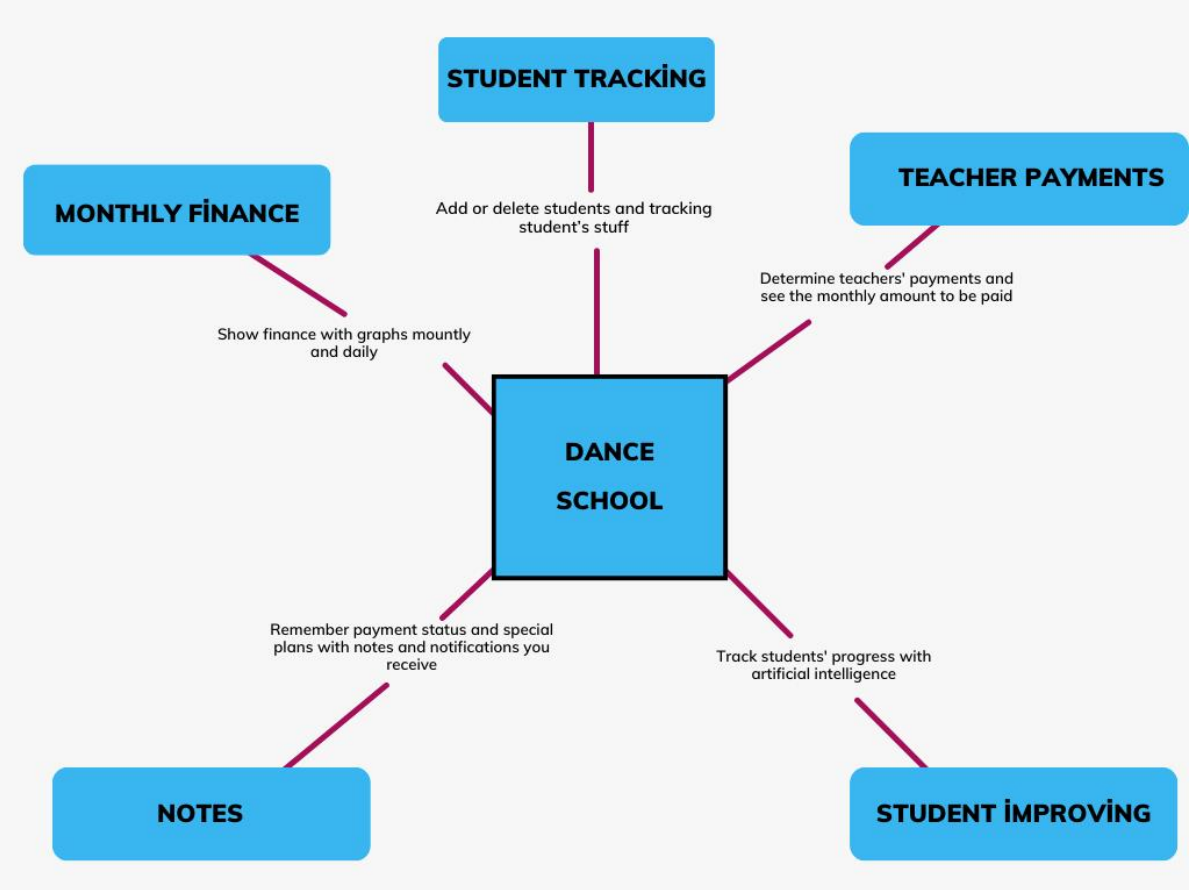

İmage 1 – Linear Diagram of Dance School

This system will calculate the income for each class and show us the values given to each teacher in the class. It will show us how much money came from where and the expenses will also be shown in the same way. We will see who has how many days left to follow people, and we will notify those who have expired. A notification will be sent to everyone who has a class before the class that day, informing them that their class has arrived, and students will be enabled to follow the class. The videos taken during the lesson will be uploaded to each class's own database, and artificial intelligence will show who gets the most out of the lesson. We will create this system with a website with a SQL-based admin panel and use artificial intelligence for the development of students.

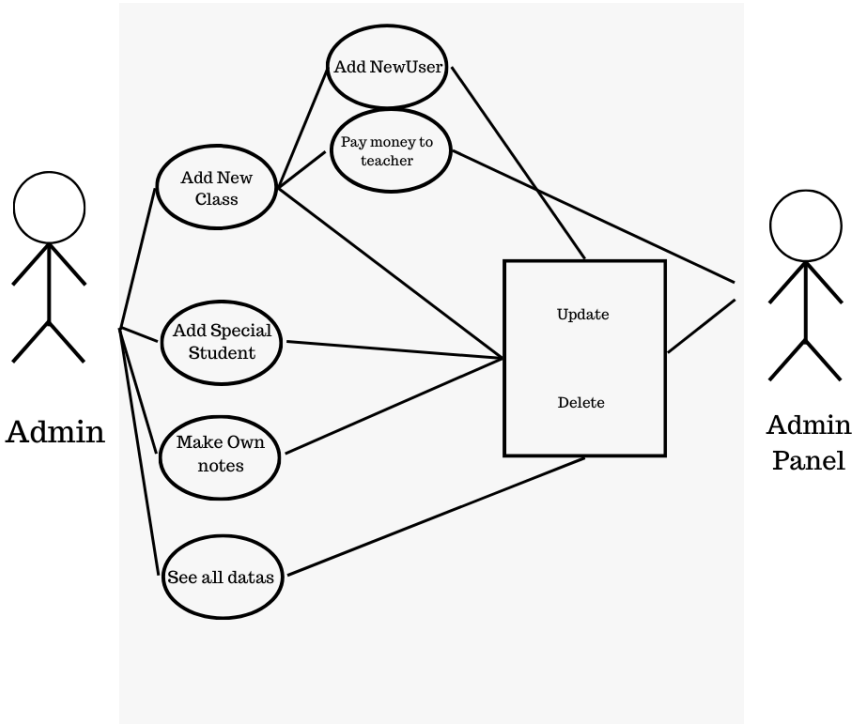

İmage 2 – Use Case Diagram of Dance School

All operations will be done by admin and all operations will be done with the help of admin panel. Before adding students, a class needs to be added; students cannot be added to a class that does not exist. One-to-one lessons or non-classroom lessons will be added to the special class section. The person will be able to write notes to himself. People will be able to view all data easily within the site. He will be able to easily edit all of them from within the site.

Project Requirement List

Software Requirements:

SR1- Website:

- Frontend:

  Only admin access for every process with Admin Panel.Languages required to create the website's interface in a way that the user can understand, using HTML, CSS and JavaScript. Main page (the table where the earnings are displayed to the user - the table with the notifications of the people who are overdue, the section where some of our grades are), a page where the payments of the students are displayed, the section where the current students are and the table with the previously registered students, a page where new people are added, the page where the payments are due, the location of the classes. It will be displayed in the admin panel where operations such as a page and a place where we can see the students in that class will take place.

- Backend:

  Creating a student list, creating a class list, calculating how much teachers will receive, checking when student payments will arrive, calculating profit, processing student information, updating information that is entered incorrectly or needs to be changed, checking people's progress with artificial intelligence, saving some videos and documents. We connect transactions such as these using a SQL-based database management system and PHP.

SR2- Database:

Using PHPmyAdmin, students' information(id, name , surname, tc, number, email , start date, lastdate, dance type, class name, gender, money), and classes'(id , teacher name, dance type, class name, day, time, teacher pay, last pay time, videos) information, profit and payment information will be kept in the database, and information will be retrieved from the database to the site. There will also be some documents and lesson videos added.

SR3- Security:

Encryption protocols will be used to protect user data.

SR4- Hosting:

A reliable hosting provider will be purchased for the website and database.

SR5- Programming Languages:

JavaScript for frontend (a library/framework such as React, Angular or Vue.js can be used).

A suitable language for the backend (such as Node.js, Python, Ruby, PHP).

SQL for database queries.

Python is very popular for artificial intelligence, machine learning and image processing. It has a wide library ecosystem (such as OpenCV, TensorFlow, PyTorch).

SR6- Responsive Design:

It needs to be a responsive design that is compatible with mobile devices.

SR7- Backup System:

Regular backups should be made with a database backup system.

SR8- User Tracking for İmproving:
An artificial intelligence system to track users' course tracking progress.

SR9- Data Analysis and Storage:

- Ability to analyze student performance.
- Creation of student profiles and secure storage of this information.

User Requirements:

UR1- User interface:

An easily navigable and understandable user interface will be designed and the colors will be easy on the eyes, and simple designs will be preferred.

UR2- Registration and Login:

There is one admin to use all system . Admin can login own password and userName.

UR3- Profile Management:

There will be places where changes will be made in case information such as student information, information about class content (number of classes, students in the class, teacher) and teacher's fee are updated.

UR4- Syllabus:

An interface where users can view the course schedule.

UR5- Notifications:

Class reminders and payment reminders will be sent to students.

UR6- Accounting Information:

A table will be created to display accounting information such as monthly income-expense statements and teacher salaries.

UR7- Mobile Compatibility:

Easy use and navigation ability on mobile devices.

UR8- Video and Document Storage:

User can upload easily each student document and lesson videos.

UR9- Class add and delete:

All classes are available on the page where the classes are added. The name of the class will be the name of the teacher, the name of the dance, the percentage achieved by the teacher, the time and day of the subject. The document will be visible when you enter the classrooms.

User can change every student class.

UR10- User add and delete:

A registration area will be created where the user can easily register new students and get the necessary information. A class must be opened before student registration. The information of the students (id, name, surname, TC, number, email, start date, lastdate, dance type, class name, gender, money) is obtained and then the student is registered.

There will be a separate registration system for private lessons. Information about the private lesson student (dance name, first name, surname, ID number, phone number, e-mail, price and grade) is obtained.

Performance Requirements:

PR1- High Availability:

The website and management panel will be made available at all times.

PR2- Fast Loading Times:

Page loading times will be minimized.

There will be optimized media files and cache usage.

PR3- Scalability:

It will be adjusted to adapt to the increasing number of users and data volume.

Scalable infrastructure will be created against the increase in instant demands.

PR4- Database Performance:

Database queries will be able to run quickly.

Database will be indexed and optimized.

PR5- Mobile Device Performance:

The website will work quickly and smoothly on mobile devices.

Satisfactory performance will be set even in low internet connection situations.

PR6- Backup and Restore Performance:

Database backup and restore operations are fast and reliable.

Regular backup processes to prevent data loss.

Usability and Accessibility Requirements:

UAR1- User-Friendly Interface:

The website and administration panel will be made understandable and easily navigable for users.

There will be simple navigation and user-friendly form designs.

UAR2- Accessible Design:

The website will be accessible to users with disabilities.

It will be compatible with screen readers and other assistive technologies.

UAR3- Consistency:

A consistent design and user experience will be provided across all pages.

There will be consistency in menus, color palette and typography.

UAR4- Error Messages:

Users will receive informative error messages about incorrect entries or transactions.

Users will be given clear instructions on what steps they should follow.

UAR5- Mobile Compatible Design:

The website will be suitable for different screen sizes and mobile devices.

In addition to responsive design, there will be mobile-specific experiences.

UAR6- Manual and Help Documentation:

Explanatory guides and help documentation will be made for users.

UAR7- Multi-Language Support:

The website will be available in more than one language.

Users will be shown content in their preferred language.

Technique Used

We will handle coding processes such as HTML, CSS, JavaScript, PHP, React.js in our project with Visual Studio Code. Libraries such as OpenCV, Dlib or pre-trained models such as VGGFace or FaceNet will be used for facial recognition to identify students in video frames.

Frontend:

We will create the skeleton of the site with HTML using Visiol Studio Code. With CSS, we will make the color settings and designs of the site as simple and understandable as possible. We will create the icons we use for a clear user experience (menu section, delete buttons, etc.) using Google icons. To show the interface required to change user information and the profit and loss statement

Backend:

In the backend part, we will process, save and delete user information with PHP. We will transfer profit and loss calculations to tables, capture class information, teachers' payments, etc., from the SQL table using PHP and transfer them to the website.

Database:

Using Xampp and PhpMyAdmin, we will create a table in which the data is stored. There will be a table where information is kept (student ID, name, surname, ID, number, age, gender, registered class). There will be a table to display income and expenses (inputs, outputs). There will be a table where the dates are checked to check that the payments are overdue. There will be a table for classes (teacher name, lesson hours, money paid to the teacher) etc. will be kept. There will also be a separate table for private lesson classes.

Mobile Compatibility:

CSS will be used for mobile compatibility and compilation will be made according to the dimensions of the page.

Artificial Intelligence (AI):

Using the languages we mentioned in the software requirements [SR5], you can perform features such as face recognition and activity information, as well as detailed analyzes such as identifying the number of faces, attention patterns or detailed features for deeper analysis to evaluate how productive you are during the lesson. These analyzes can help you understand how much you're getting out of the lessons and evaluate their consolidation performance.

Gant Chart

All sections in our project have been planned and divided into sections. You can see the progress of this project and how long it will take in this table.

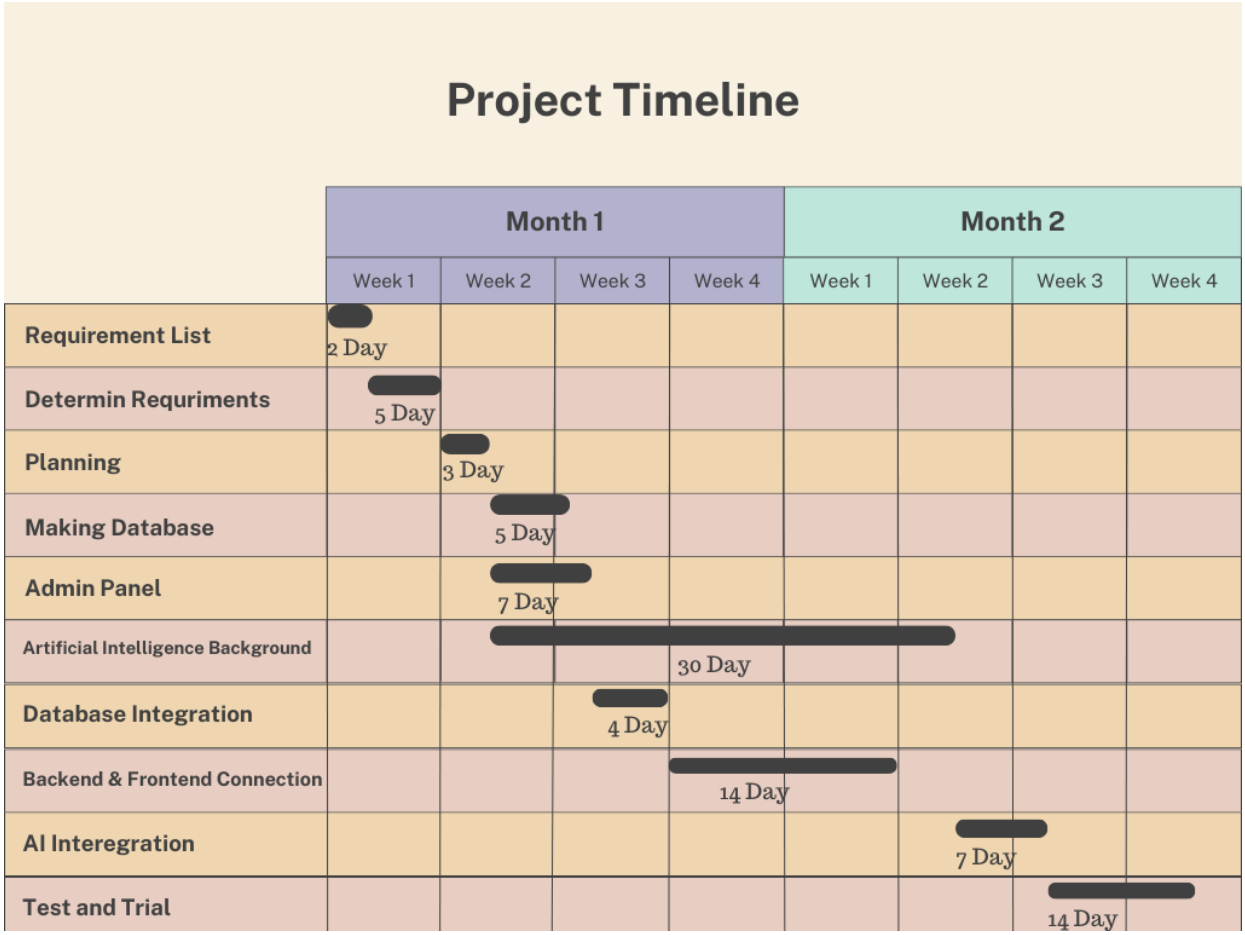

İmage 3 – Gant Chart of Dance School