ESTUDIEZ PORTAL

SOFTWAVE REQUIREMENTS SPECIFICATION

VERSION 1.0

LINK DEMO

Team’s website: https://phuopham.github.io/Techwiz2022/#!/
Source code on GitHub: https://github.com/phuopham/Techwiz2022
Data access:

1. Student: Nguyen Hoang Nam
2. Teacher: Le Kim Tung
3. Parent: Tran Duy Anh

PROBLEM DEFINITION

Nowadays, education and training is a field that plays an important role for all countries and ethnic groups at all times. In today's trend of knowledge development, education – training is considered the most important policy and measure for development in many countries around the world and Viet Nam is no exception. Education contributes to raising people's intellectual level in all countries and ethnic groups. Today, education and training also contribute to the creation of a new social value system. In the current knowledge economy, knowledge is the product of education and training and the most valuable asset of people and society. Ownership of knowledge becomes the most important property recognized and protected by countries. Resources for socio-economic development in each country and ethnic group from natural resources and muscular labor are the main sources of human resources, whose knowledge is the most basic.

However, the general education system still has many difficulties in updating and managing information in the learning process of students for Teachers/Parents/Guardians. Students who fail exams might not reveal their marks to their Parents/Guardians because of fear. Teachers too are overloaded with work, because of which it becomes difficult to remember each child's academic progress. Also, students too must be kept aware of their score progress and marks required for passing External Exams.

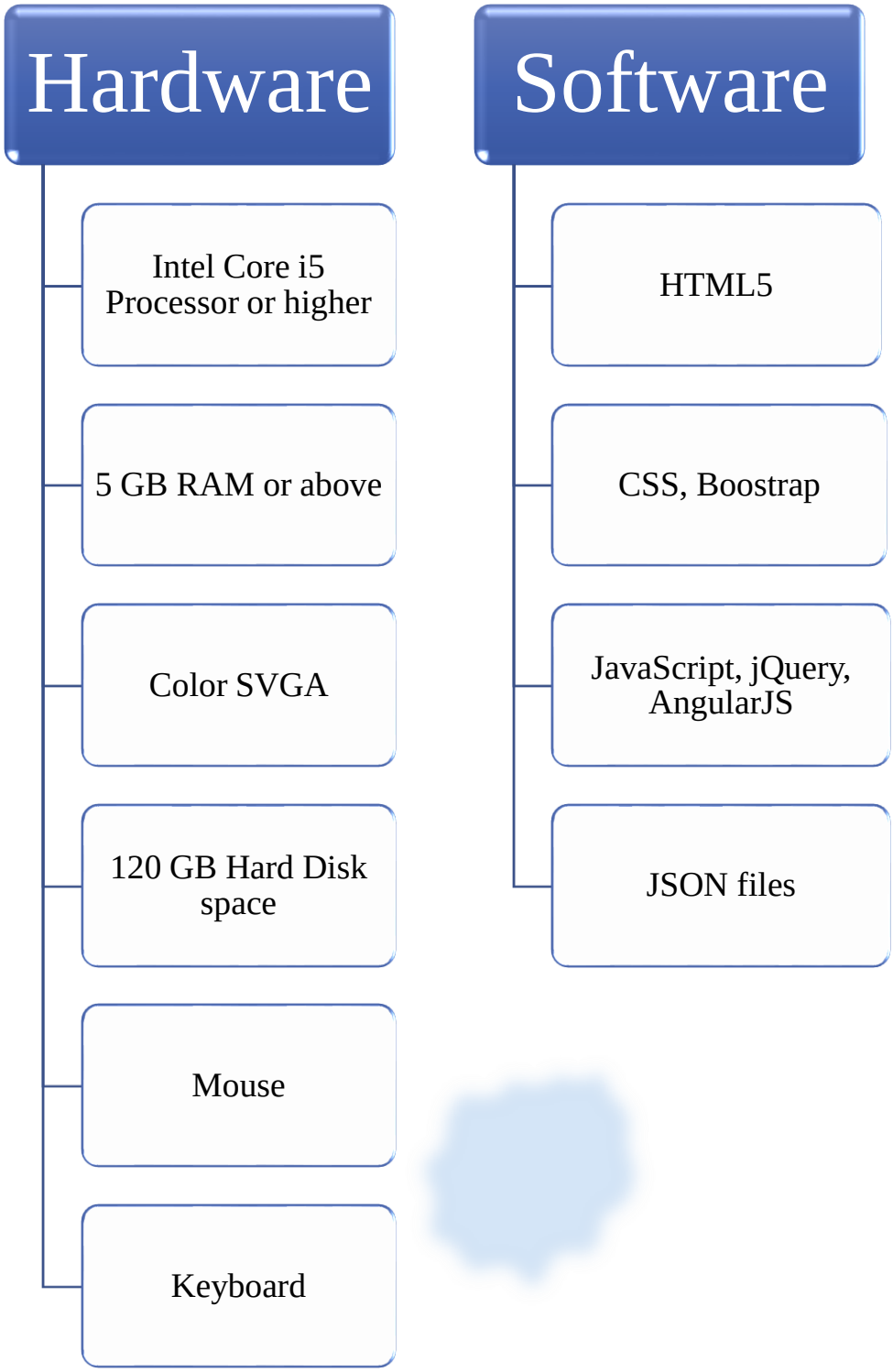
With the power of technology 4.0 – the period of strong development of artificial intelligence and the internet, those difficulties are gradually solved. Therefore, it helps teachers easily remember students' learning progress and have a reasonable teaching direction. Their parents update their child's information accurately and quickly.

And we – the HelloWorld.txt team bring the design of a website called "eStudiez" that will be used to track students' academic progress born. The system will accept different types of users such as students, parents/guardians, and teachers to view and track progress. Students with poor academic performance will be provided with additional materials through this portal to improve their performance your

your ability. The Portal will also provide information about Exam Preparation classes to improve performance. Students and parents/guardians can view and track the student’s progress.

To have the main benefits of the website, "eStudiez Portal" is built with functions that are highly interactive, easy to manipulate, and suitable for ages and positions. Here are the components and features included in the "eStudiez Portal" website.

DESIGN SPECIFICATIONS



RESPONSIVE DESIGN

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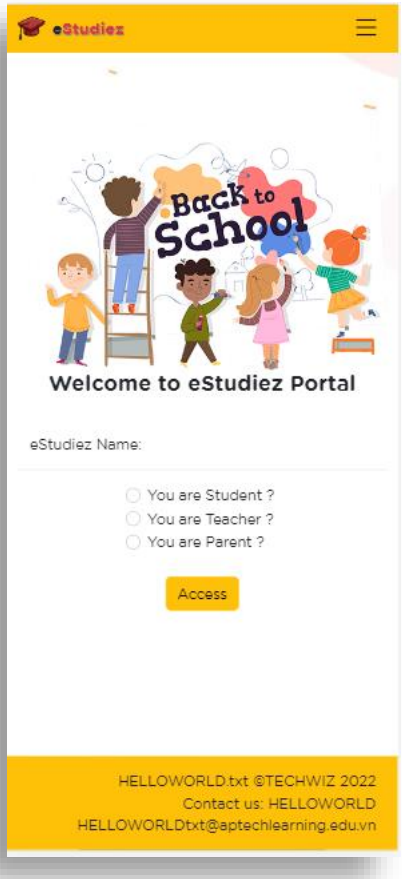
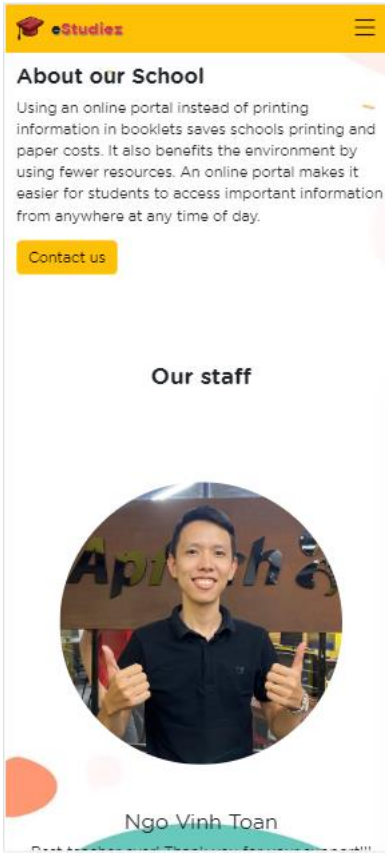
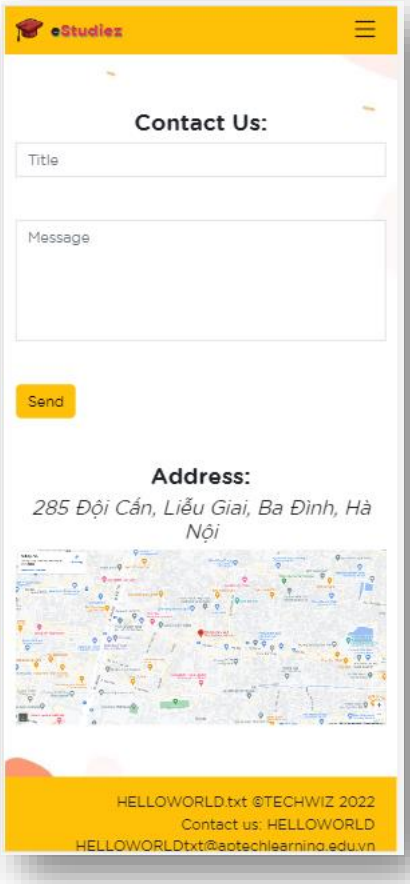
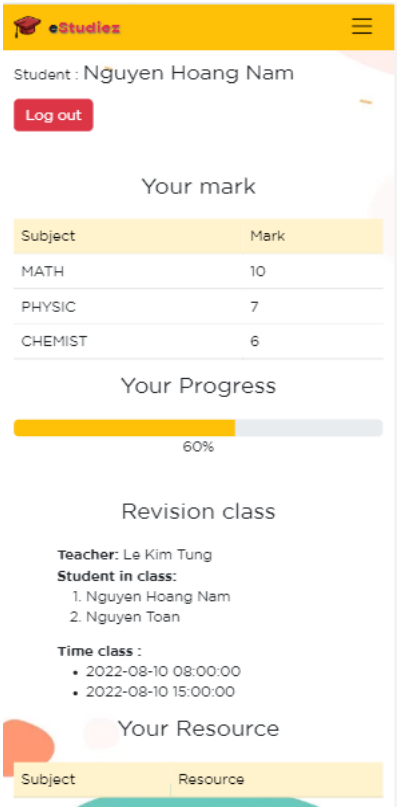
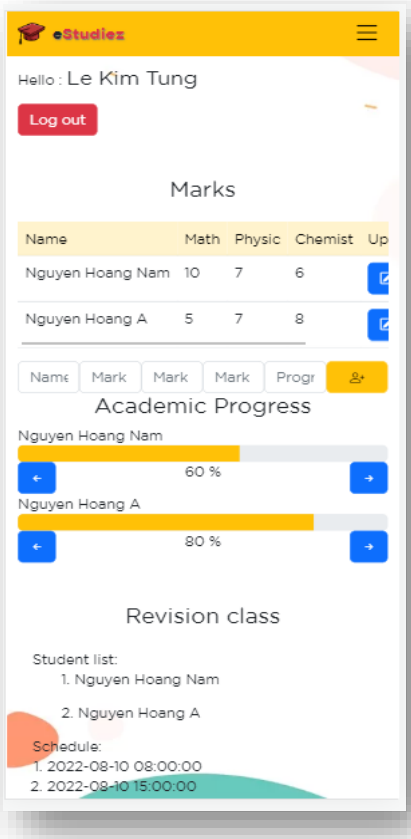


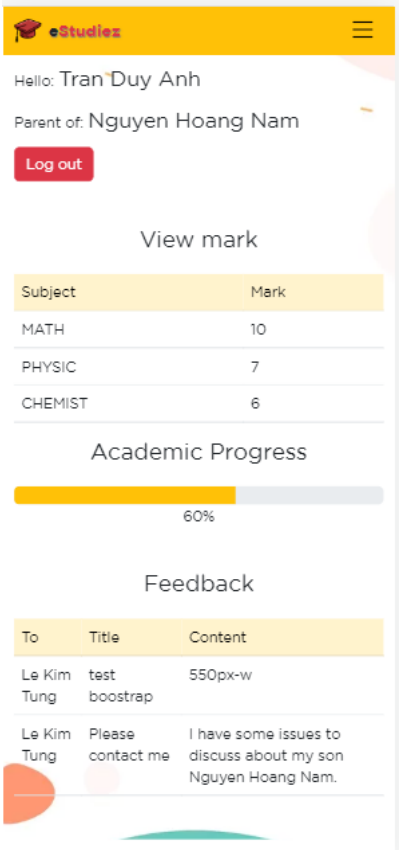




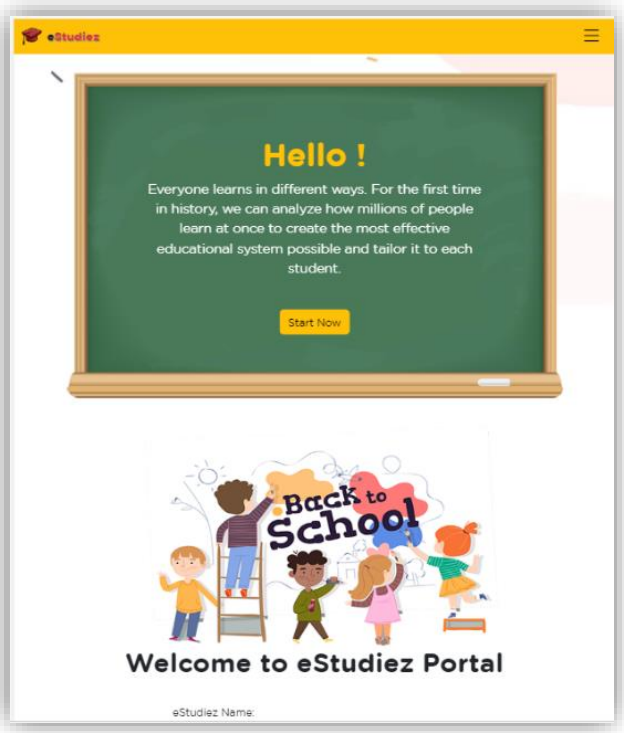

eStudiez
Student : Nguyen Hoang Nam
Log out
Your mark
Subject
Mark
MATH
10
PHYSIC
7
CHEMIST
6
Your Progress
60%
Revision class
Teacher: Le Kim Tung
Student in class:
1. Nguyen Hoang Nam
2. Nguyen Toan
Time class :
2022-08-10 08:00:00
2022-08-10 15:00:00
Your Resource
Subject
Resource

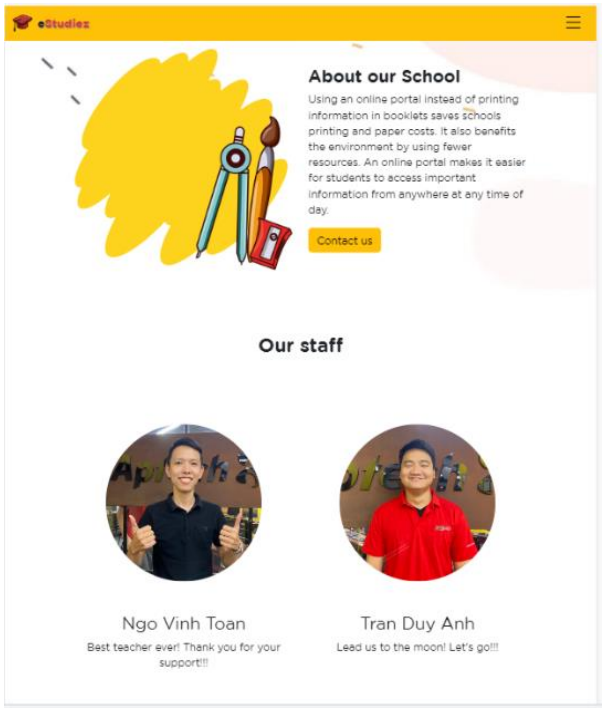

eStudiez
Hello : Le Kim Tung
Log out
Marks
Name
Math
Physic
Chemist
Up
Nguyen Hoang Nam
10
7
6
Nguyen Hoang A
5
7
8
Academic Progress
Nguyen Hoang Nam
60 %
Nguyen Hoang A
80 %
Revision class
Student list:
1. Nguyen Hoang Nam
2. Nguyen Hoang A
Schedule:
1. 2022-08-10 08:00:00
2. 2022-08-10 15:00:00

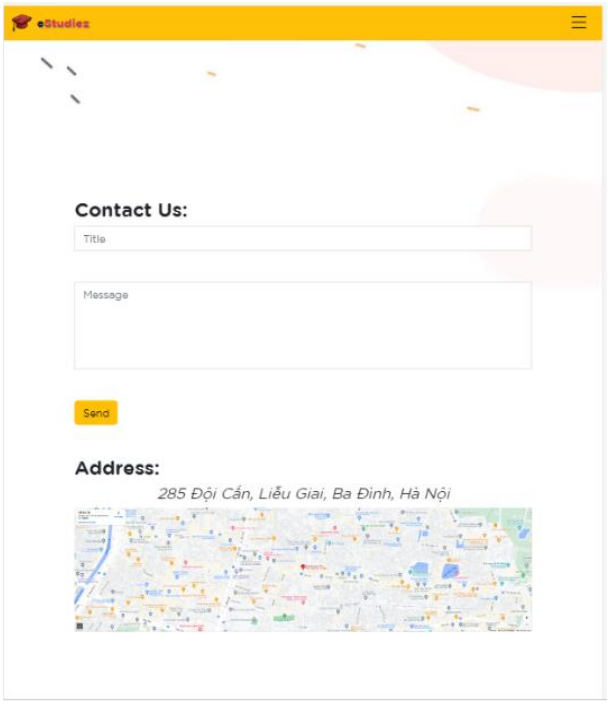
Main menu
Home
About
Contact

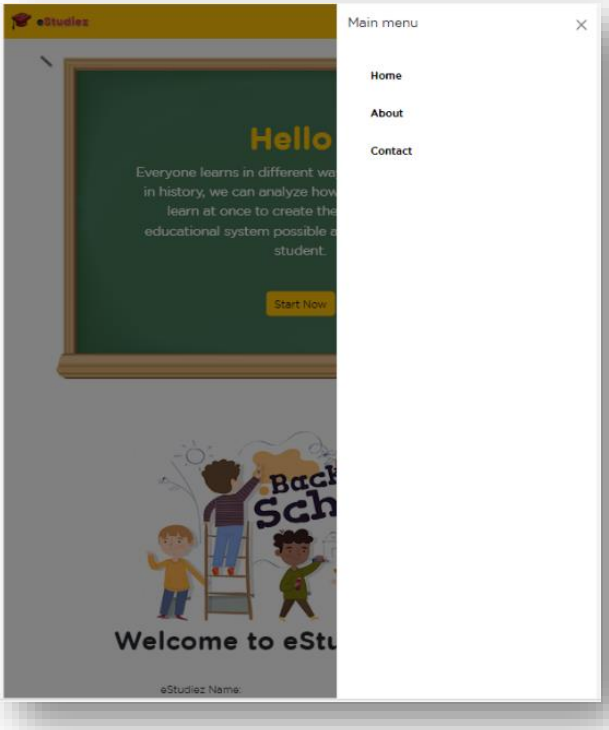

eStudiez
Hello: Tran Duy Anh
Parent of: Nguyen Hoang Nam
Log out
View mark
Subject
Mark
MATH
10
PHYSIC
7
CHEMIST
6
Academic Progress
60%
Feedback
To
Title
Content
Le Kim Tung
test boostrap
550px-w
Le Kim Tung
Please contact me
I have some issues to discuss about my son Nguyen Hoang Nam.

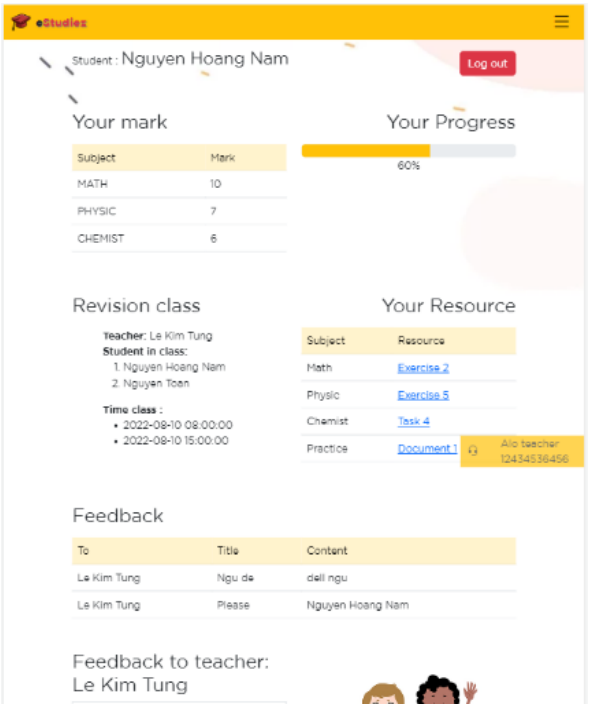
2. iPad Air (width – height: 820px – 1180px):

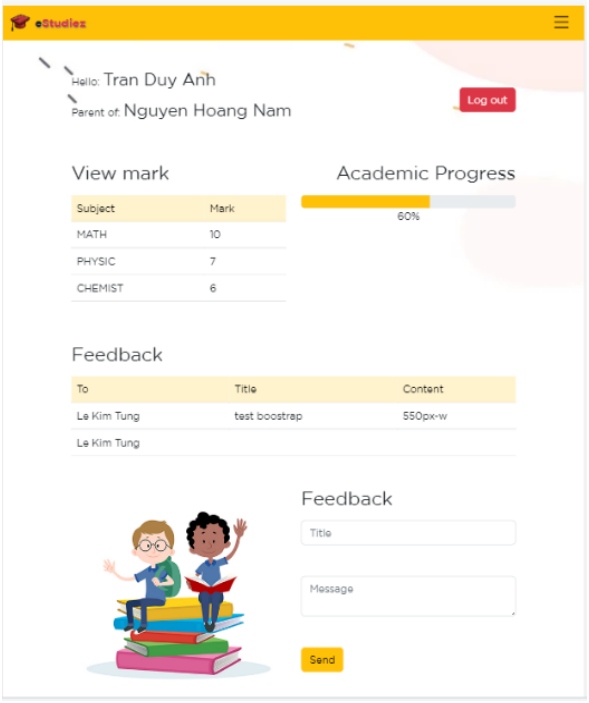


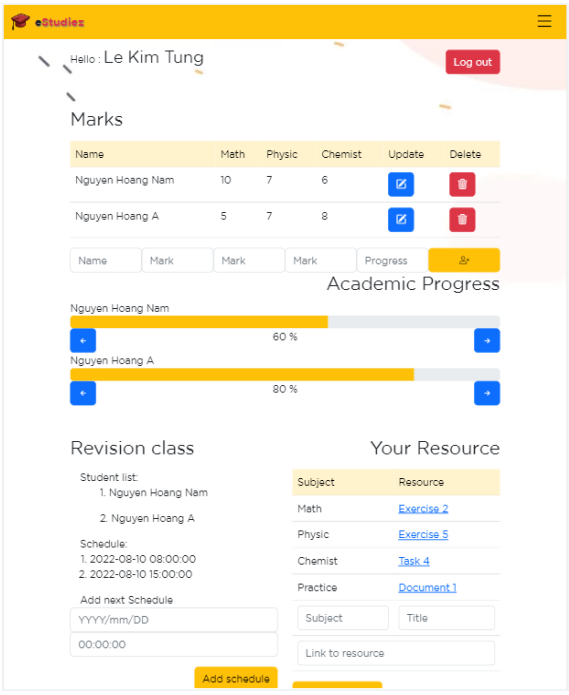




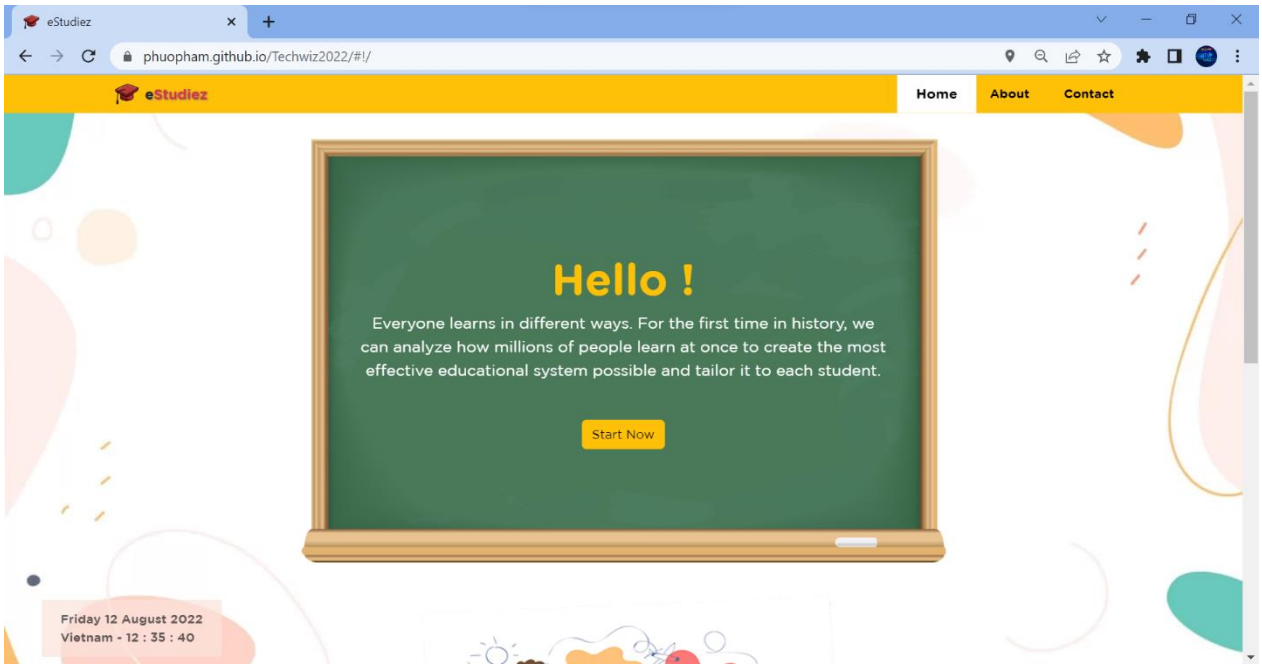


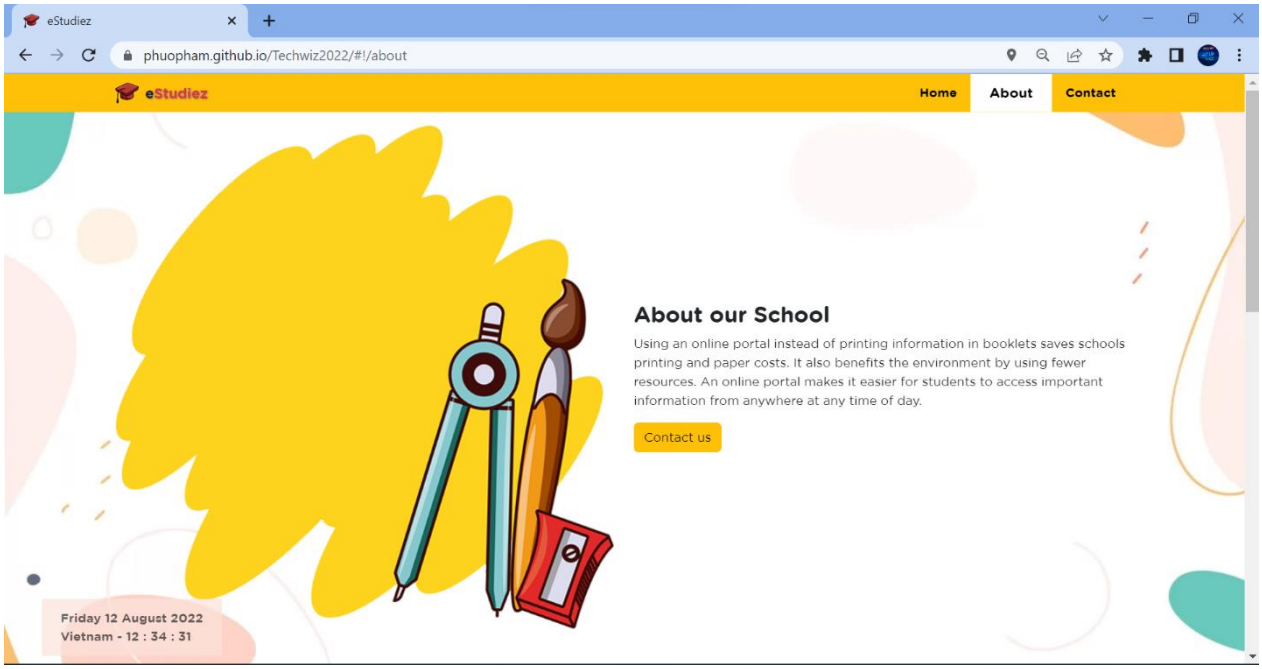

eStudiez
Student : Nguyen Hoang Nam
Log out
Your mark
Subject Mark
MATH 10
PHYSIC 7
CHEMIST 6
Your Progress
60%
Revision class
Teacher: Le Kim Tung
Student in class:
1. Nguyen Hoang Nam
2. Nguyen Toan
Time class :
• 2022-08-10 08:00:00
• 2022-08-10 15:00:00
Your Resource
Subject Resource
Math Exercise 2
Physic Exercise 5
Chemist Task 4
Practice Document 1
Alo teacher
12434536456
Feedback
To Title Content
Le Kim Tung Ngu de dell ngu
Le Kim Tung Please Nguyen Hoang Nam
Feedback to teacher:
Le Kim Tung

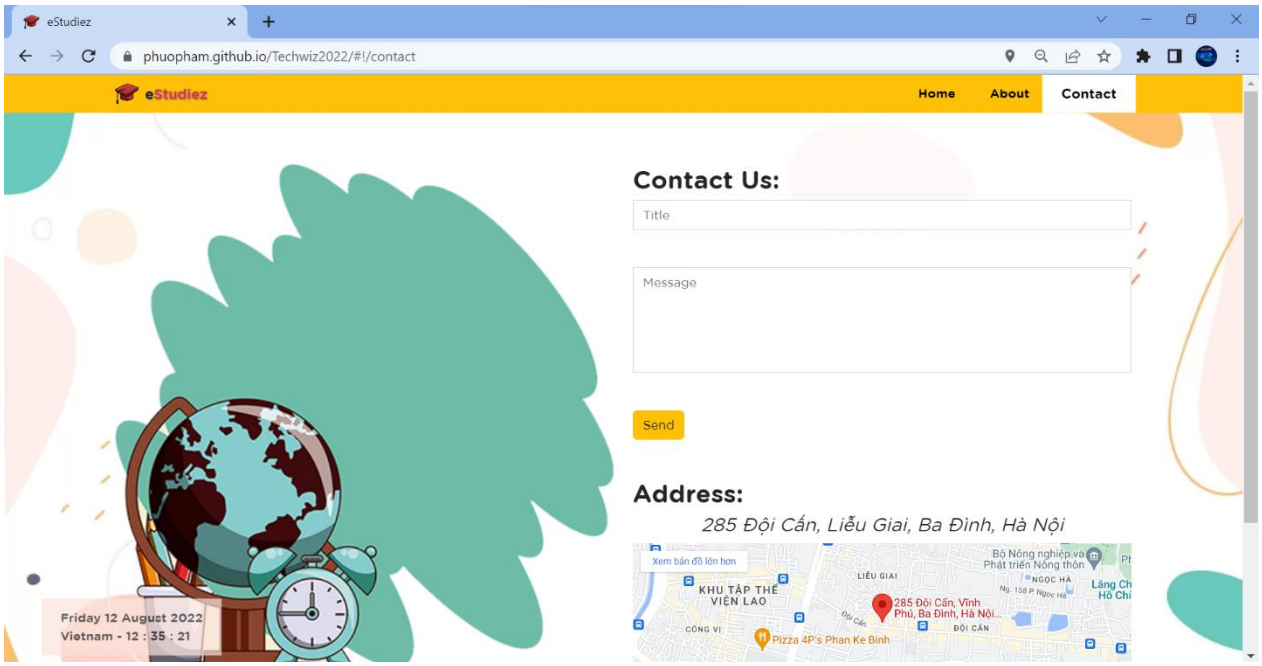

eStudiez
Hello: Tran Duy Anh
Parent of: Nguyen Hoang Nam
Log out
View mark
Subject Mark
MATH 10
PHYSIC 7
CHEMIST 6
Academic Progress
60%
Feedback
To Title Content
Le Kim Tung test boostrap 550px-w
Le Kim Tung
Feedback
Title
Message
Send

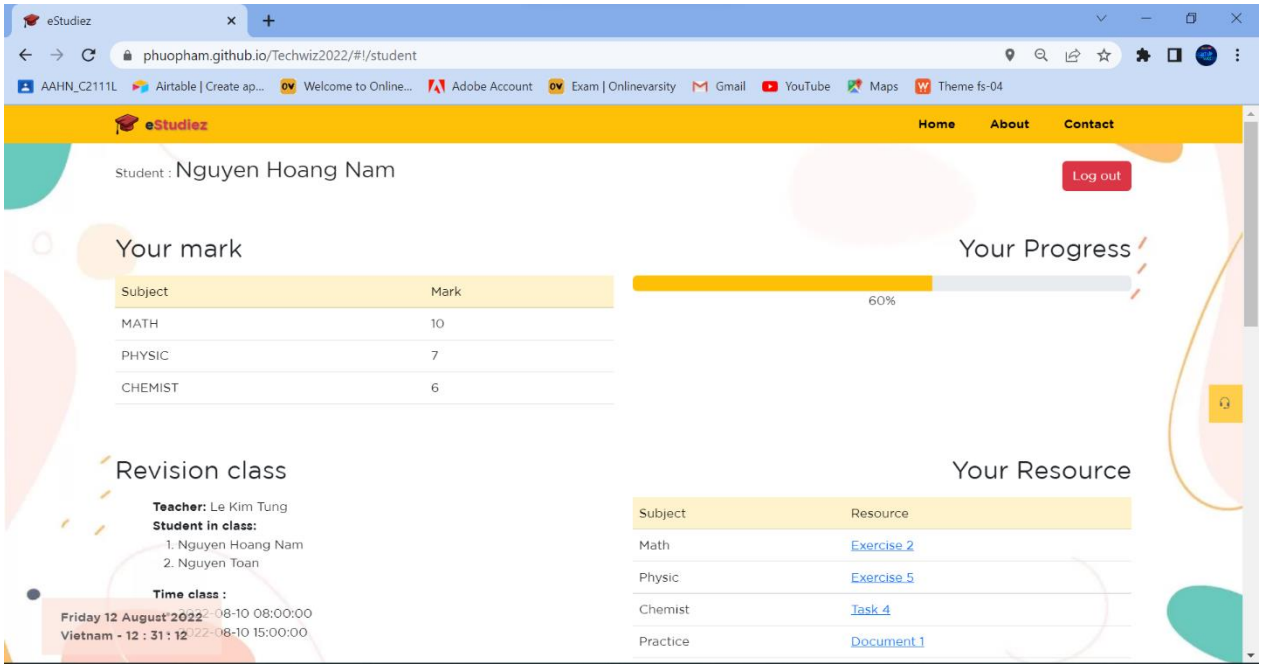

eStudiez
Hello : Le Kim Tung
Log out
Marks
Name Math Physic Chemist Update Delete
Nguyen Hoang Nam 10 7 6
Nguyen Hoang A 5 7 8
Name Mark Mark Mark Progress
Academic Progress
Nguyen Hoang Nam
60 %
Nguyen Hoang A
80 %
Revision class
Student list:
1. Nguyen Hoang Nam
2. Nguyen Hoang A
Schedule:
1. 2022-08-10 08:00:00
2. 2022-08-10 15:00:00
Add next Schedule
YYYY/mm/DD
00:00:00
Add schedule
Your Resource
Subject Resource
Math Exercise 2
Physic Exercise 5
Chemist Task 4
Practice Document 1
Subject Title
Link to resource

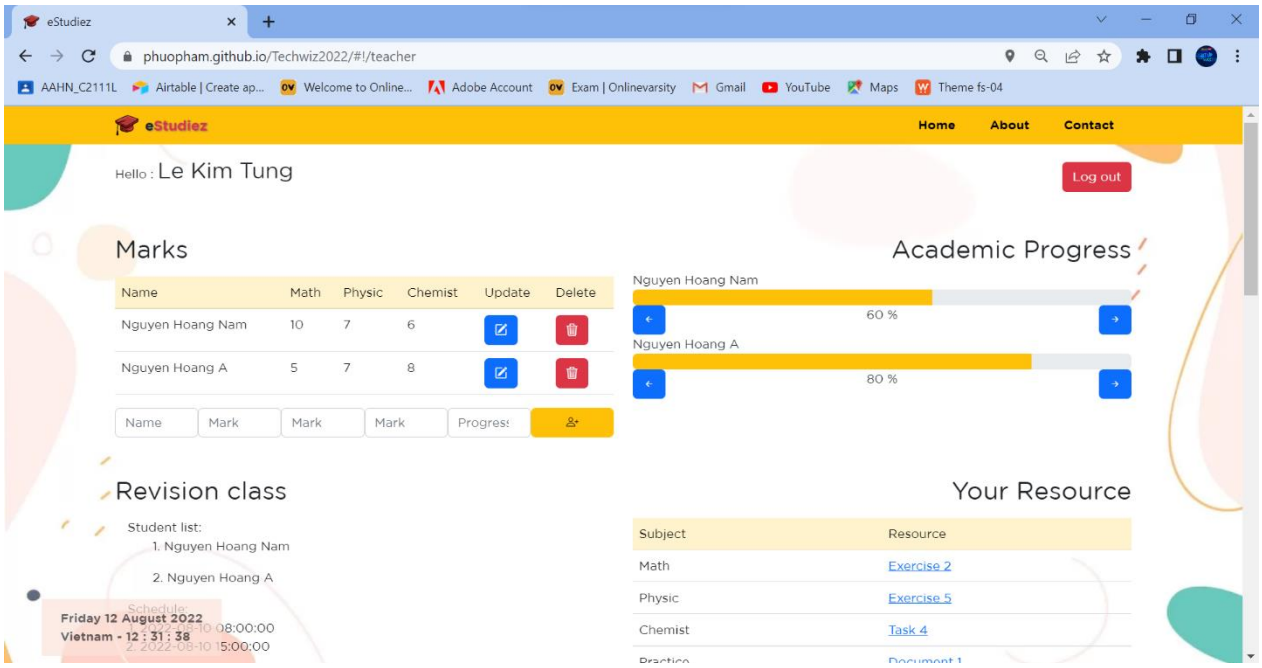
3. Desktop (width – height: 1920px – 1080px):

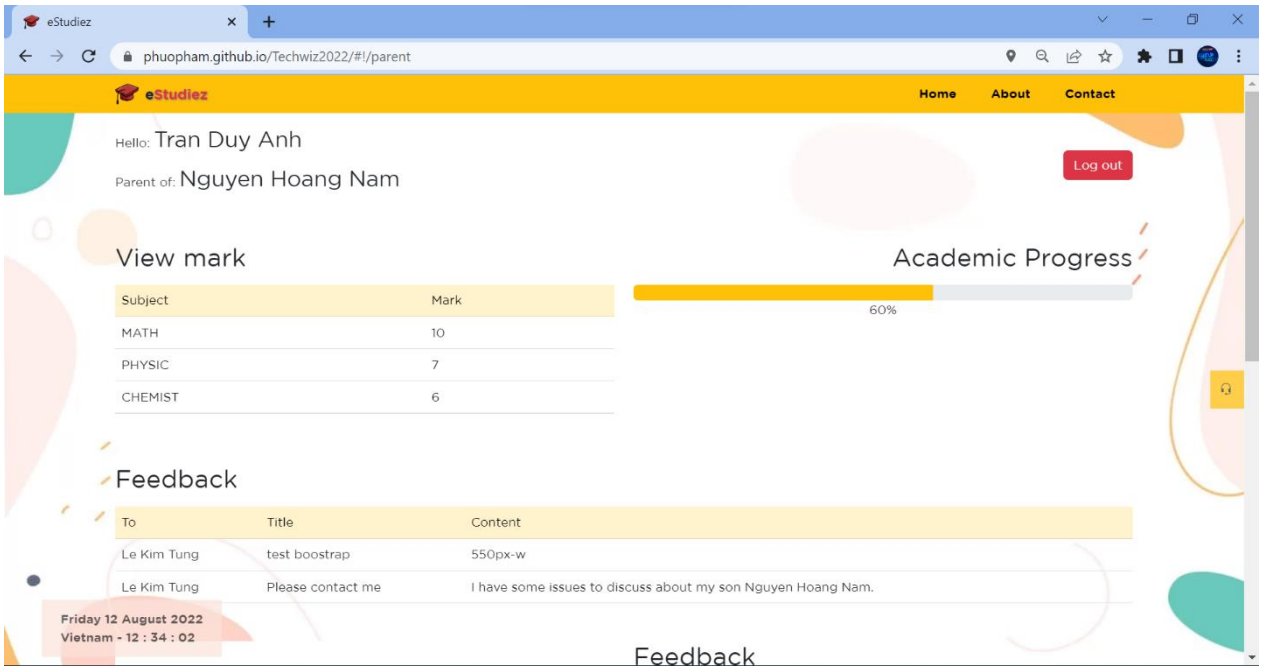





eStudiez
phuopham.github.io/Techwiz2022/#!/contact
eStudiez
Home
About
Contact
Contact Us:
Title
Message
Send
Address:
285 Đội Cấn, Liễu Giai, Ba Đình, Hà Nội
Friday 12 August 2022
Vietnam - 12 : 35 : 21


eStudiez
phuopham.github.io/Techwiz2022/#!/student
eStudiez
Home
About
Contact
Student : Nguyen Hoang Nam
Log out
Your mark
Subject
Mark
MATH
10
PHYSIC
7
CHEMIST
6
Your Progress
60%
Revision class
Teacher: Le Kim Tung
Student in class:
1. Nguyen Hoang Nam
2. Nguyen Toan
Time class :
Friday 12 August 2022
Vietnam - 12 : 31 : 12
Your Resource
Subject
Resource
Math
Exercise 2
Physic
Exercise 5
Chemist
Task 4
Practice
Document 1


eStudiez
phuopham.github.io/Techwiz2022/#!/teacher
AAHN_C2111L
Airtable | Create ap...
Welcome to Online...
Adobe Account
Exam | Onlinevarsity
Gmail
YouTube
Maps
Theme fs-04
eStudiez
Home
About
Contact
Hello : Le Kim Tung
Log out
Marks
Name
Math
Physic
Chemist
Update
Delete
Nguyen Hoang Nam
10
7
6
Nguyen Hoang A
5
7
8
Name
Mark
Mark
Mark
Progress
Academic Progress
Nguyen Hoang Nam
60 %
Nguyen Hoang A
80 %
Revision class
Student list:
1. Nguyen Hoang Nam
2. Nguyen Hoang A
Schedule:
Friday 12 August 2022
Vietnam - 12 : 31 : 38
Your Resource
Subject
Resource
Math
Exercise 2
Physic
Exercise 5
Chemist
Task 4

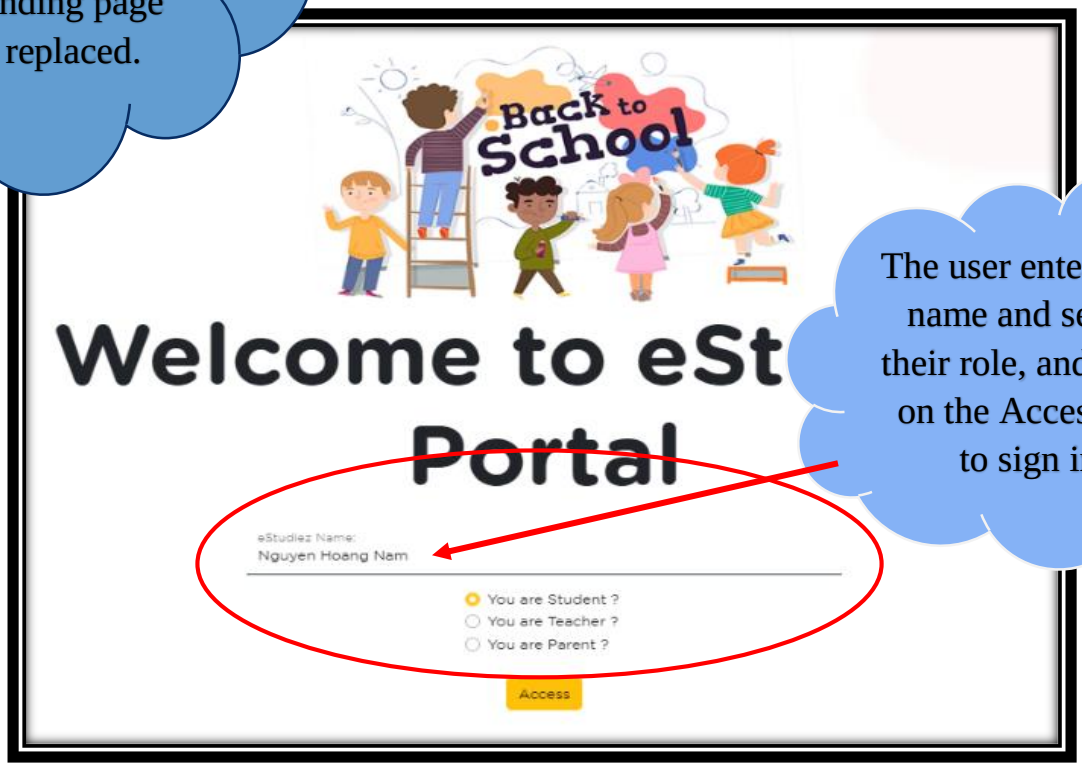

eStudiez
phuopham.github.io/Techwiz2022/#!/parent
eStudiez
Home
About
Contact
Hello: Tran Duy Anh
Parent of: Nguyen Hoang Nam
Log out
View mark
Subject
Mark
MATH
10
PHYSIC
7
CHEMIST
6
Academic Progress
60%
Feedback
To
Title
Content
Le Kim Tung
test boostrap
550px-w
Le Kim Tung
Please contact me
I have some issues to discuss about my son Nguyen Hoang Nam.
Friday 12 August 2022
Vietnam - 12 : 34 : 02
Feedback

FEATURE DESCRIPTION

1. Home page

Users click on the Start Now box to have the computer screen scroll down to log in form.

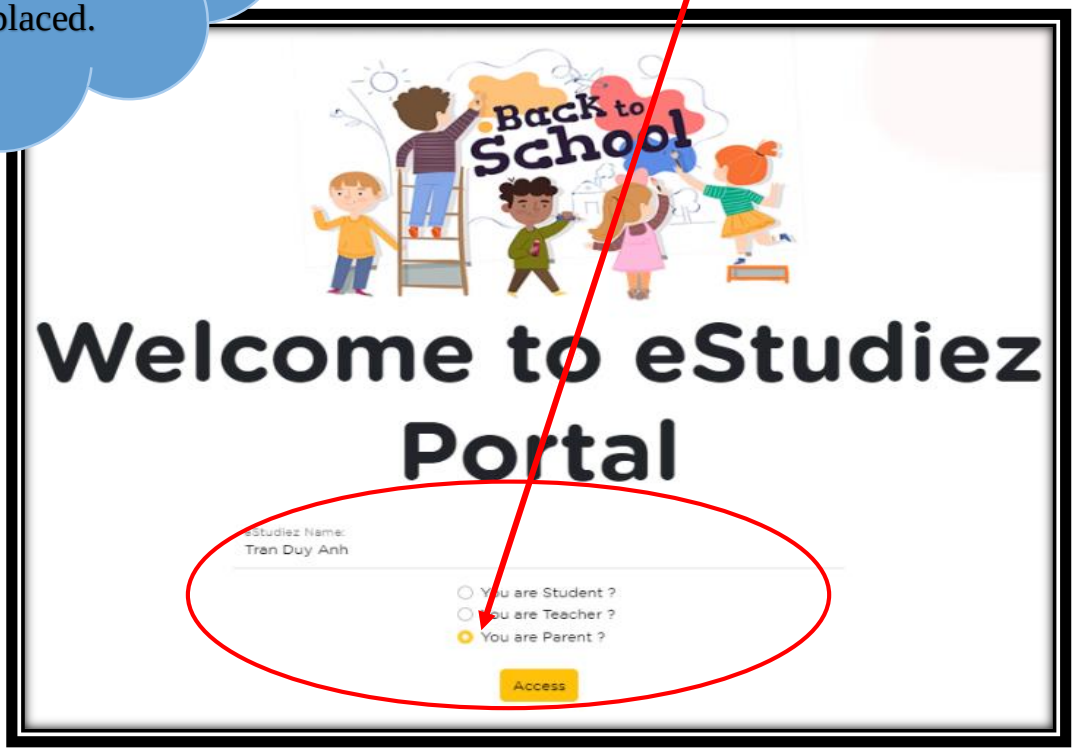
If the input data is correct, the login is successful, and corresponding page will be replaced.

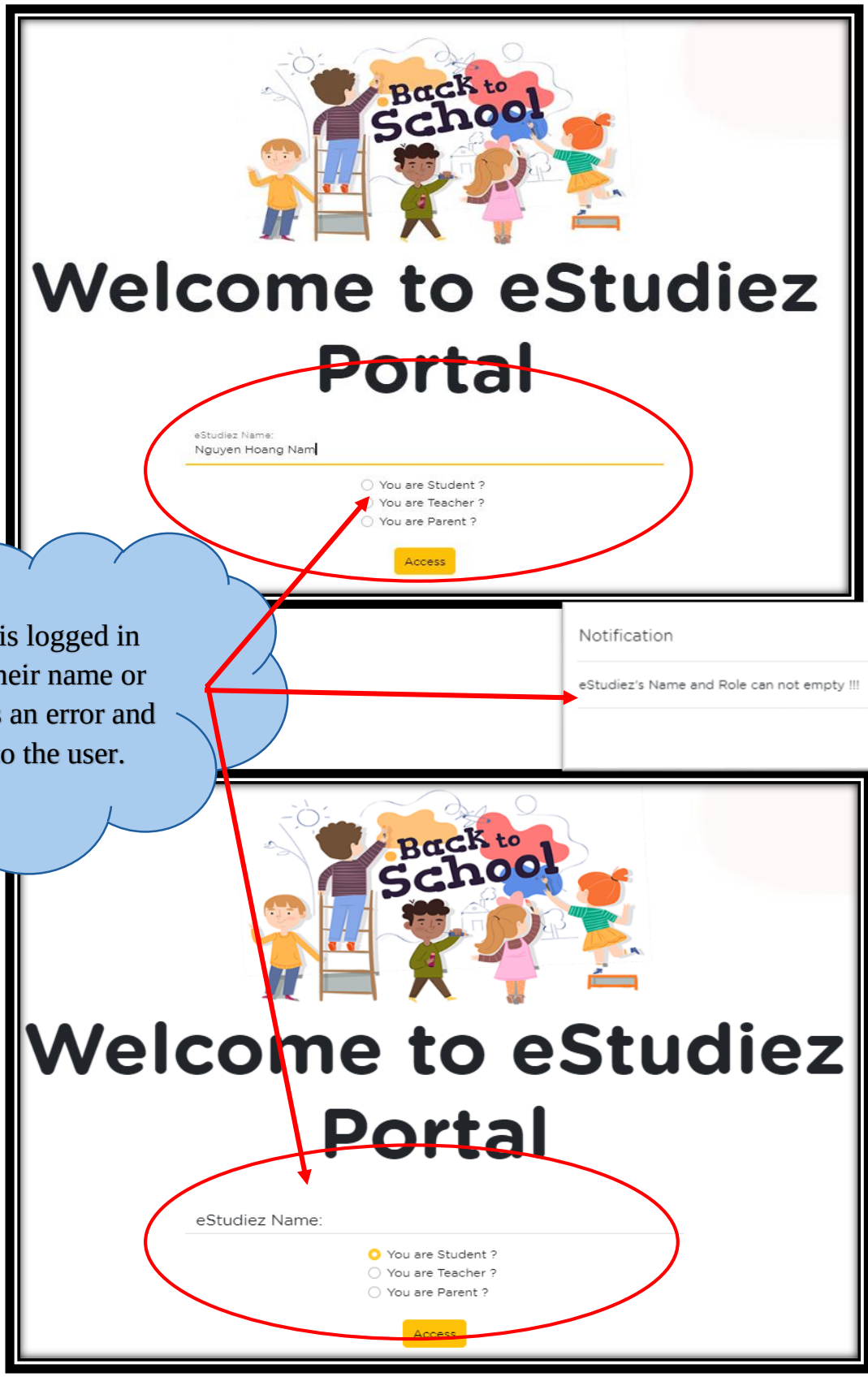


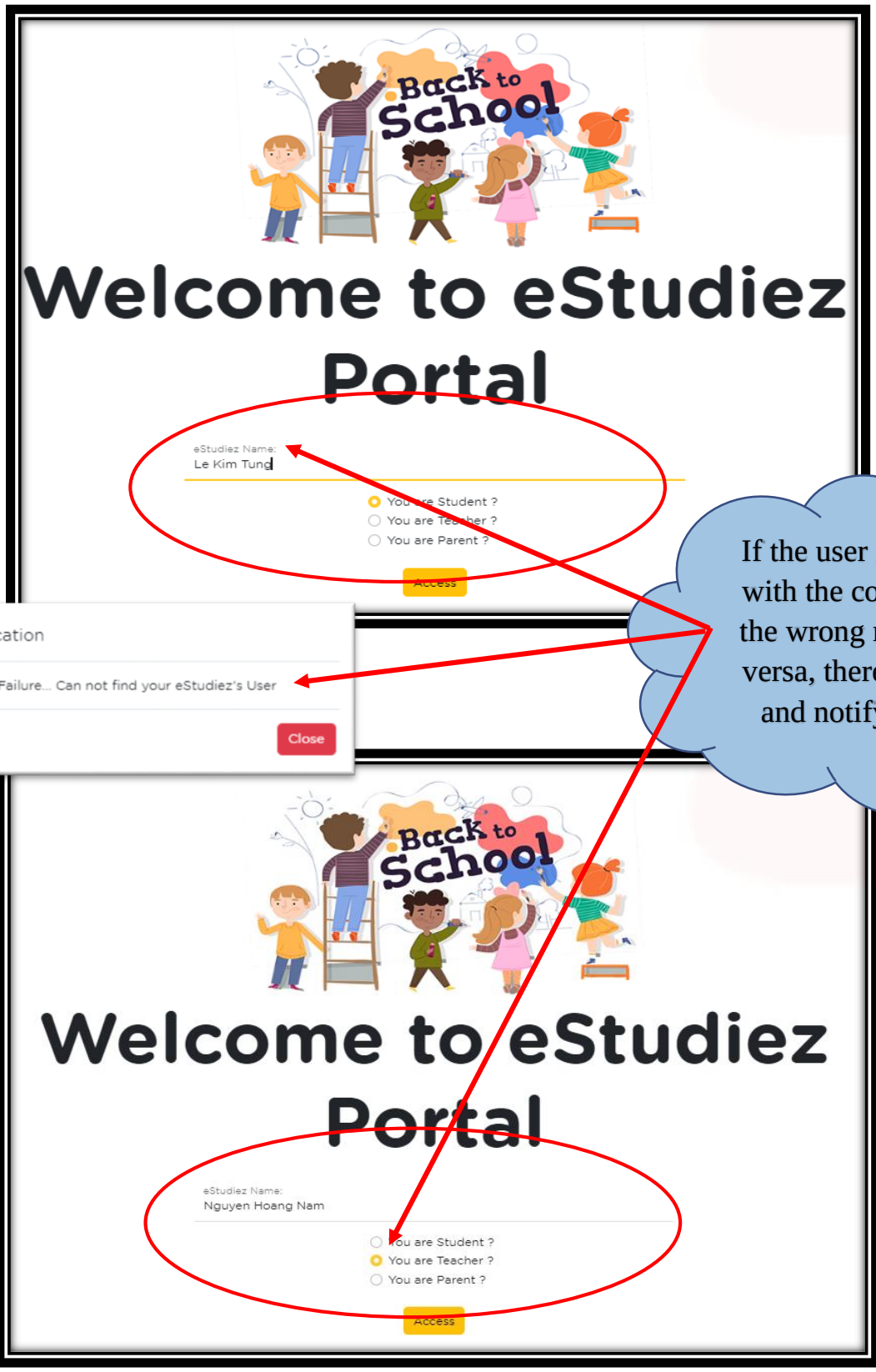
The user enters their name and selects their role, and clicks on the Access box to sign in.

The user enters their name and selects their role, and clicks on the Access box to sign in.

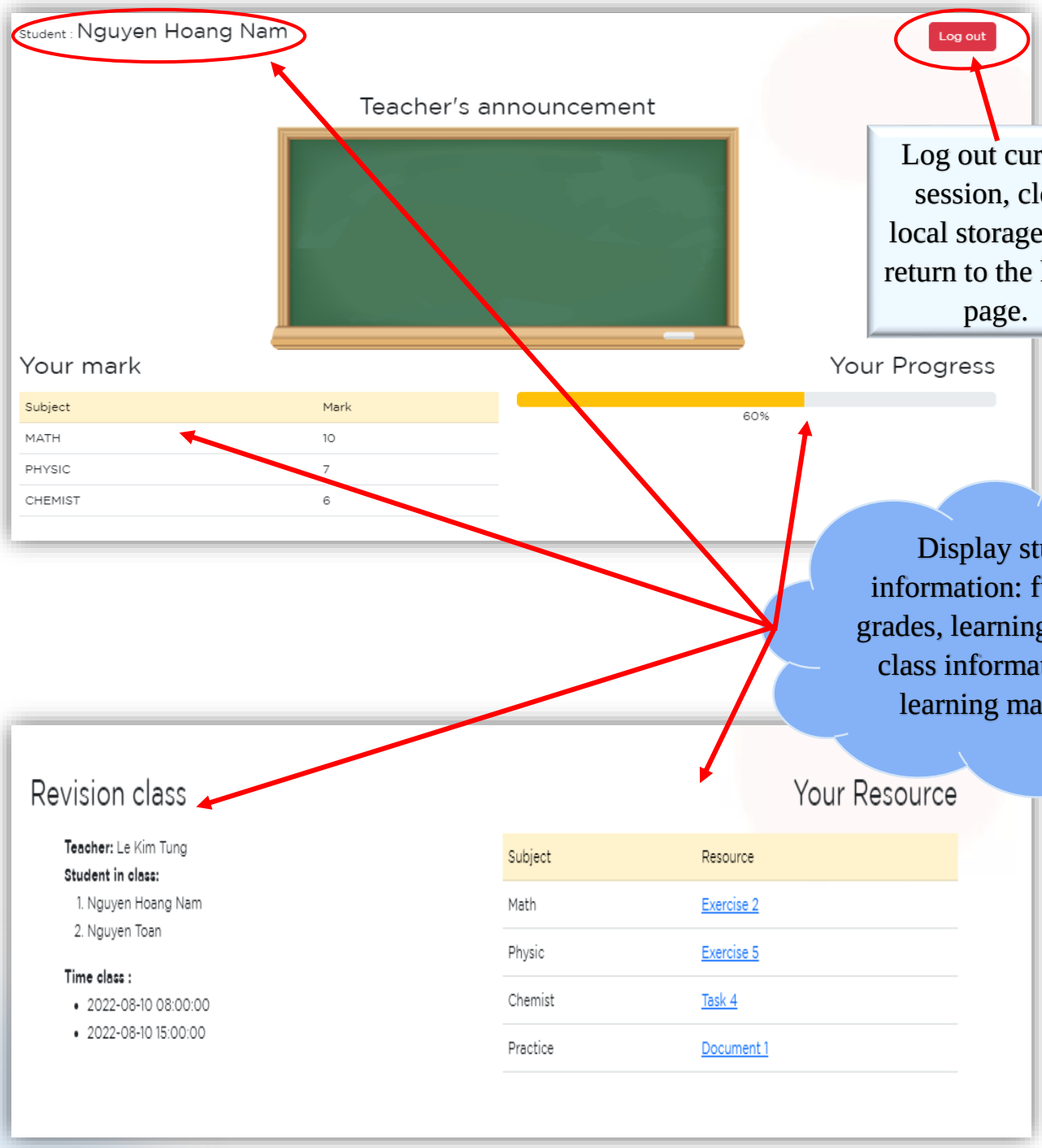
If the input data is correct, the login is successful, and corresponding page will be replaced.



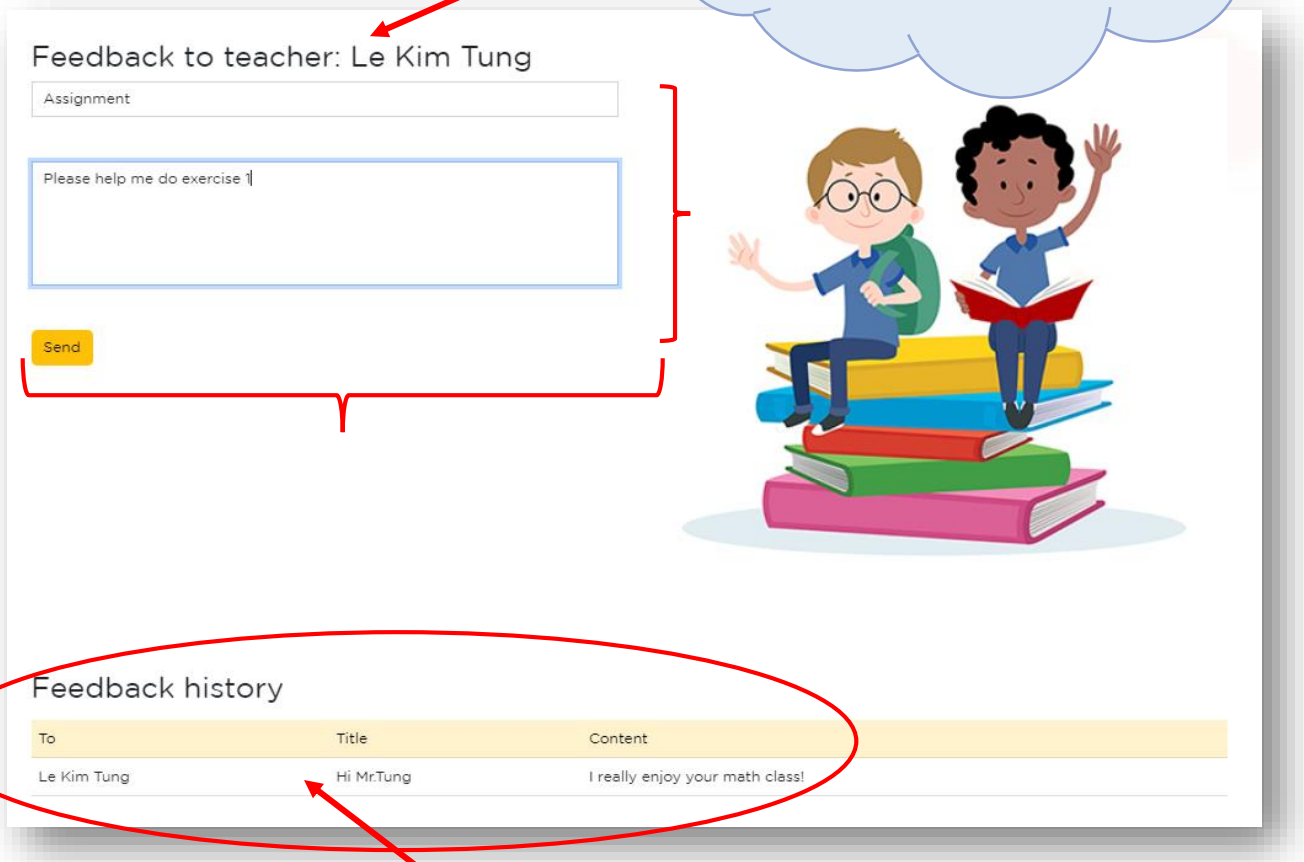

Back to School
Welcome to eStudiez Portal
eStudiez Name:
Nguyen Hoang Nam
You are Student ?
You are Teacher ?
You are Parent ?
Access
If the user is logged in with only their name or role, there is an error and message to the user.
Notification
eStudiez's Name and Role can not empty !!!
Close
Back to School
Welcome to eStudiez Portal
eStudiez Name:
You are Student ?
You are Teacher ?
You are Parent ?
Access


Back to School
Welcome to eStudiez Portal
eStudiez Name:
Le Kim Tung
You are Student ?
You are Teacher ?
You are Parent ?
Access
Notification
Access Failure... Can not find your eStudiez's User
Close
If the user is logged in with the correct name, the wrong role, or vice versa, there is an error and notify the user.
Back to School
Welcome to eStudiez Portal
eStudiez Name:
Nguyen Hoang Nam
You are Student ?
You are Teacher ?
You are Parent ?
Access

2. Student page

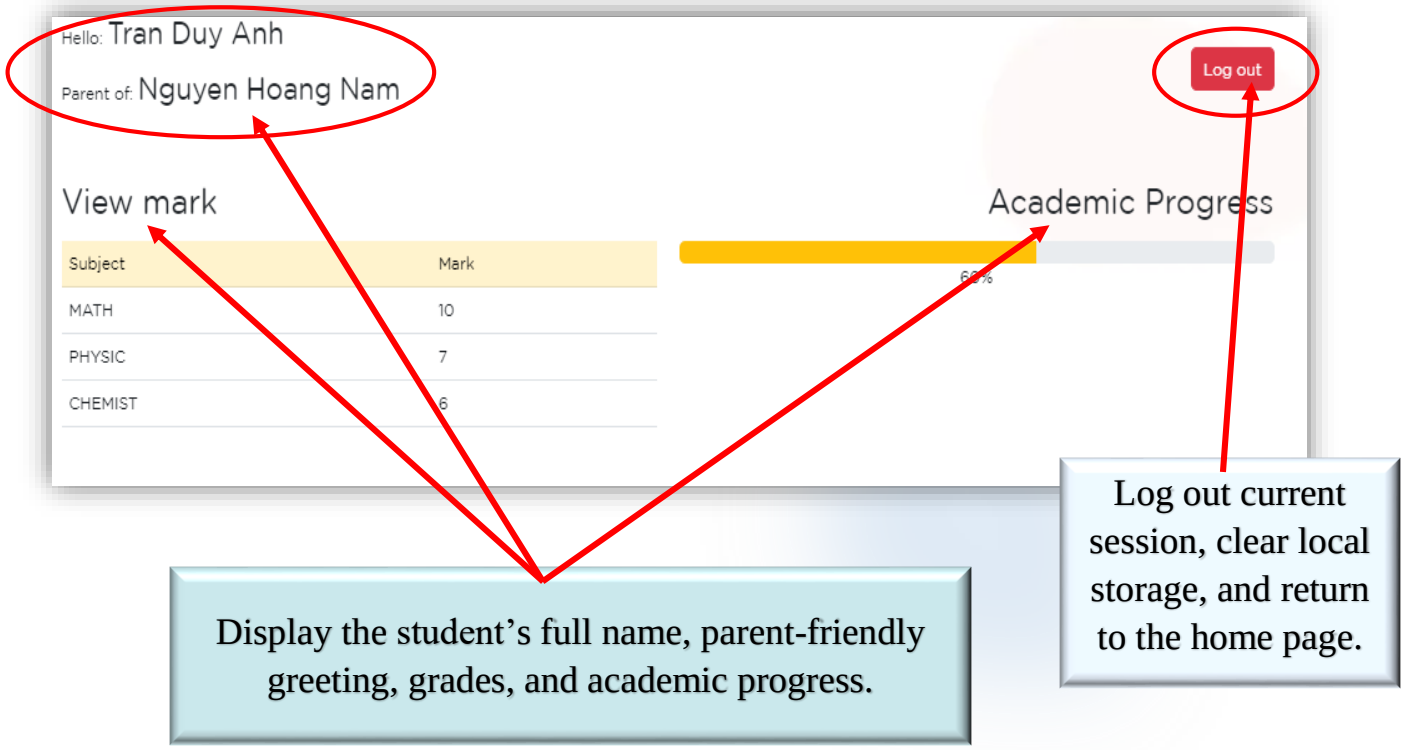


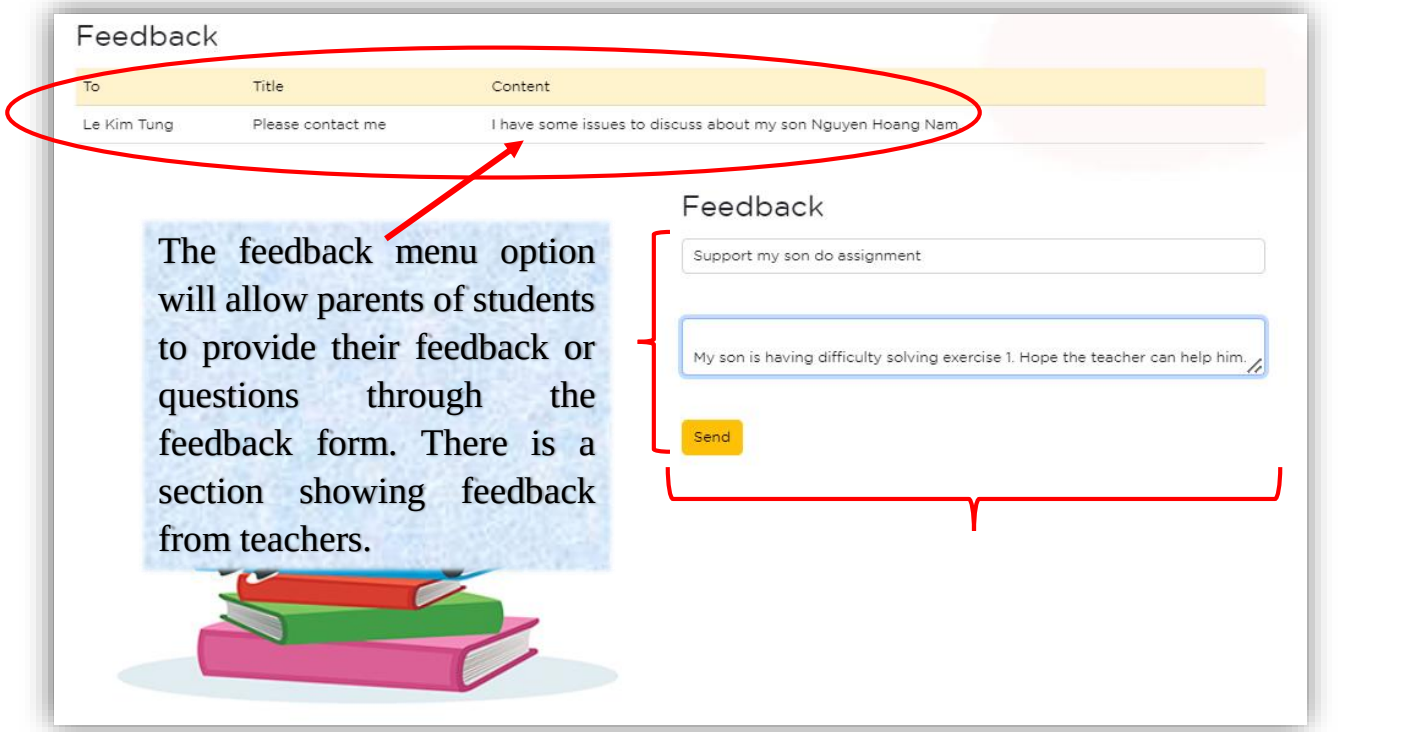
Feedback section provide communication channel for student to corresponding teacher.



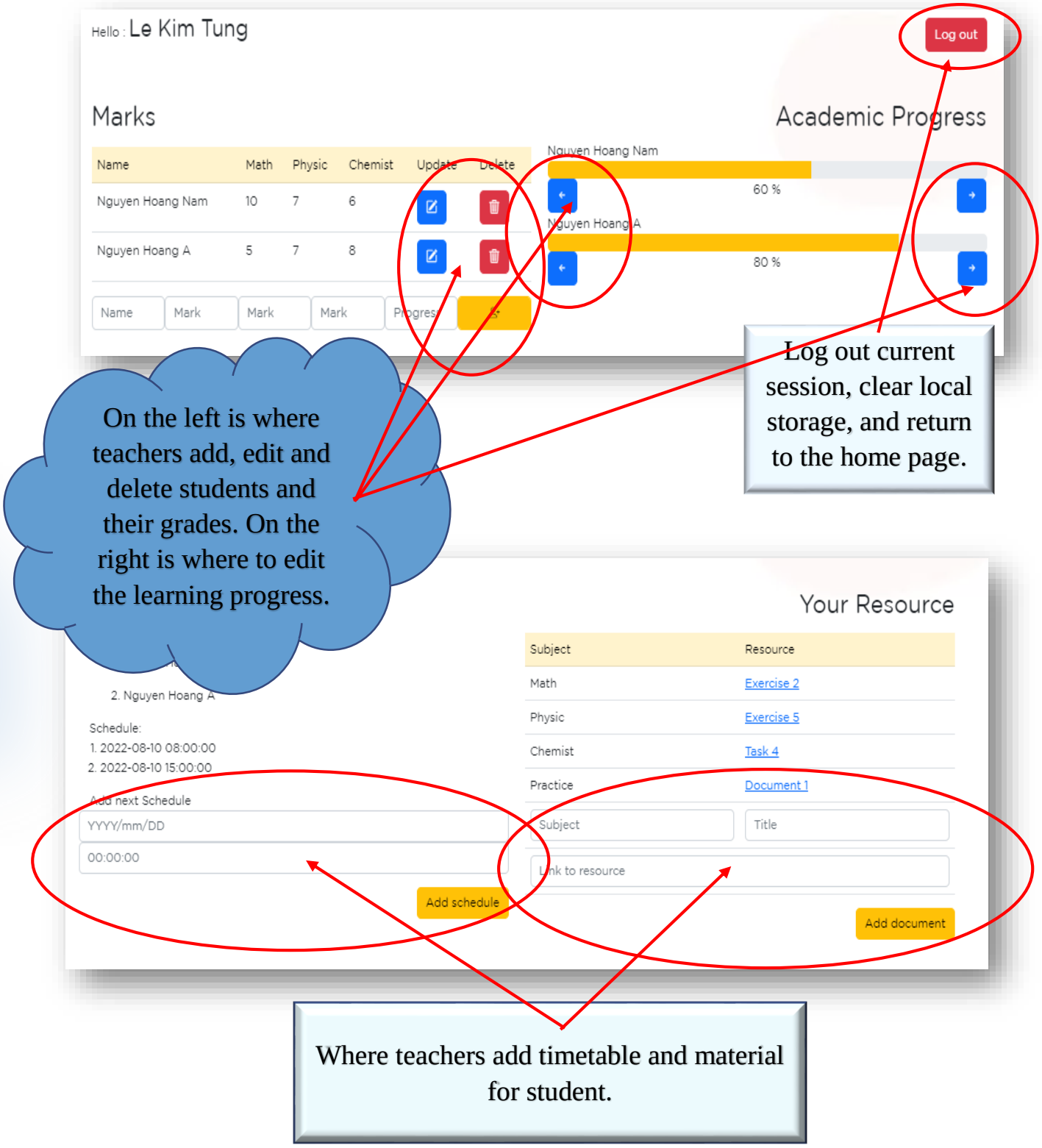
When feedback is submitted, an entry will be create in local storage. If the student access to the portal, feedback will be shown.

3. Parents page

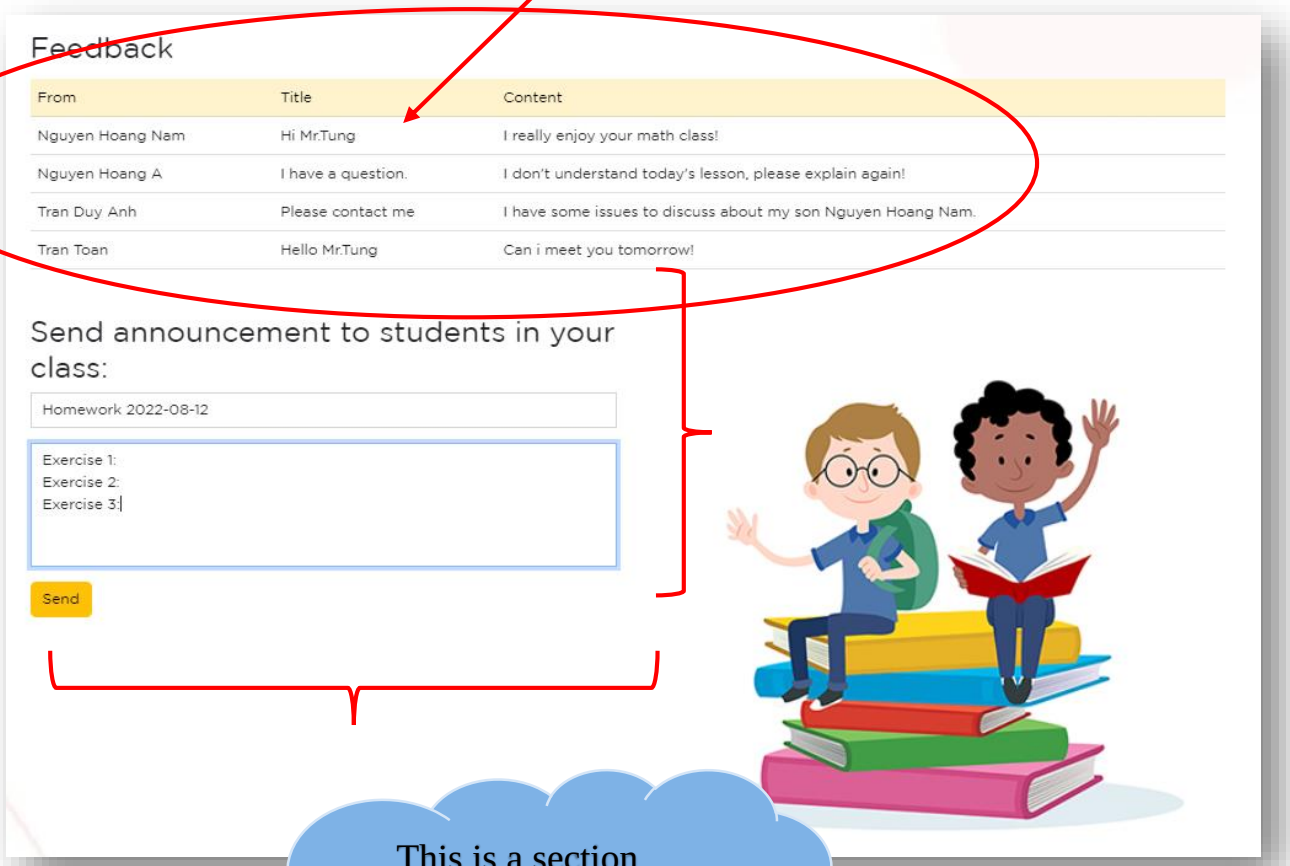




4. **Teacher page**

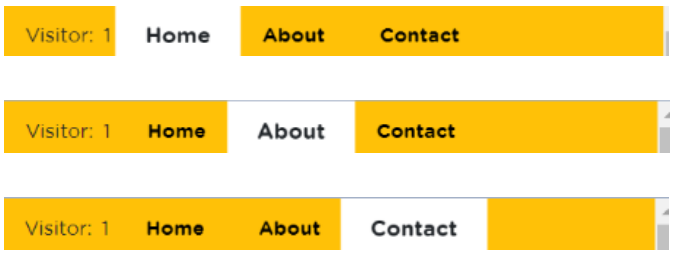
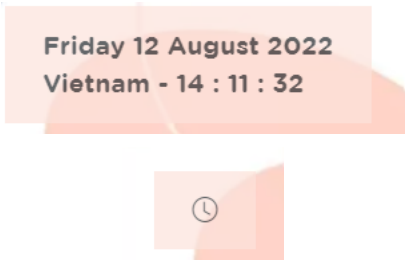
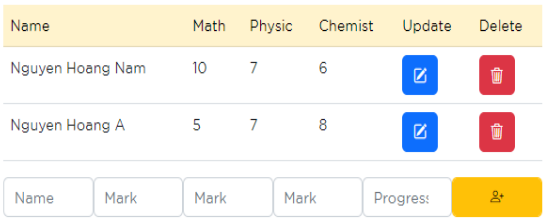


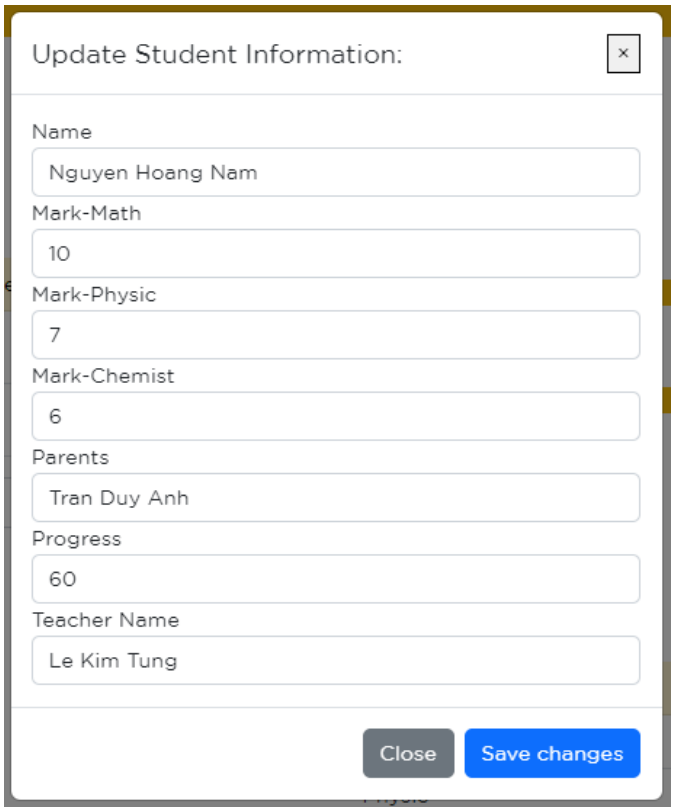
When feedback is submitted, an entry will be created in local storage. If the student access to the portal, feedback will be shown.

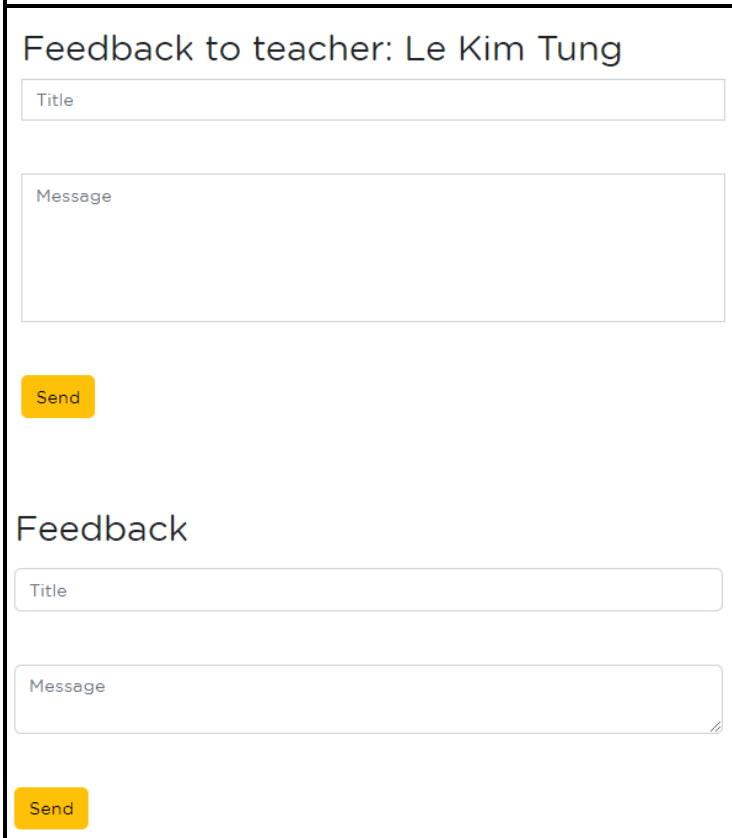


This is a section teachers write notices to send to student in class.

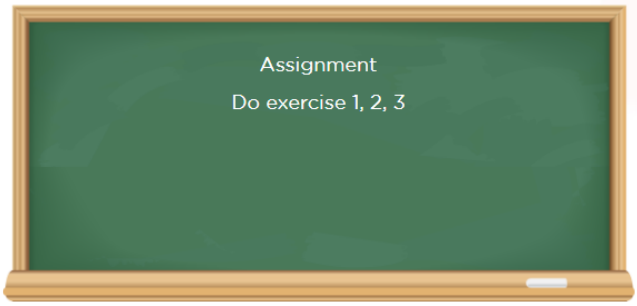
EXTRA FEATURE

	❖ Display a visitor count at the top right corner of the page beside a logo image. **(because of the limit of technology, we use local storage to store visitor count)** ❖ Menu options change color on hover and also after clicking.
	❖ Display a continuous scrolling ticker at the bottom of the page with the current date, time, and location.
	❖ Create add, update and delete student by using databinding. ❖ Form update is displayed when teacher update information of student.





❖ Student and parents can send feedback to teacher.

localhost/123/Techwiz2022/#!/student localhost/123/Techwiz2022/#!/teacher localhost/123/Techwiz2022/#!/parent	❖ Route is protected when user not log in (**using local storage for author**).
Teacher's announcement  Send announcement to students in your class: Title Message Send	❖ Teacher's announcement will display on each student site when student log in. ❖ Teacher can send announcement to all student in teacher's class.

ENTITY RELATIONSHIP

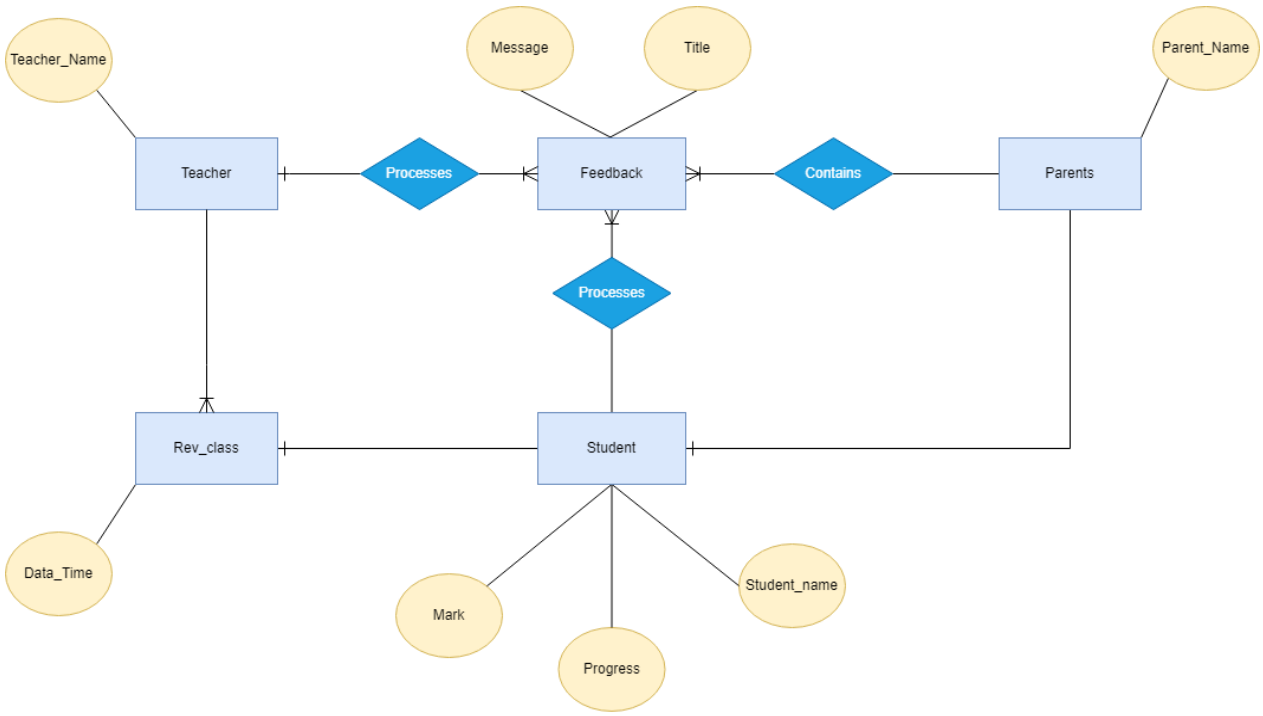


Diagram showing the relationship of data between JSON files

DATABASE DESIGN

According to the requirement specification, we decided to manipulate the JSON file with a structure of 3 JSON files as follows:

1. feedback.json

Contain a list of feedback. Each feedback has the following entry:

- Recipient name
- Sender name
- Title of the feedback
- Main content of the feedback

Data structure:

```
[
    {
        "from": "Tran Danh Tu",
        "to": "Tran Duy Anh",
        "title": "You are good at math",
        "message": "Please work hard on Physic"
    },
    {
        "from": "Le Kim Tung",
        "to": "Tran Duy Anh",
        "title": "You are so good at math",
        "message": "Help your friends"
    },
    {
        "from": "Tran Duy Anh",
        "to": "Le Kim Tung",
        "title": "You are not good at math",
        "message": "Please work hard"
    },
    {
        "from": "Nguyen Hoang Nam",
        "to": "Le Kim Tung",
        "title": "You are good at physic",
        "message": "Please help Nguyen Van A on exercise 5"
    }
]
```

2. revclass.json

Contain a list of teachers with their classes. Each of the items has the following entry:

- Name of responsible teacher
- Name of student
- Schedule for the next learning lesson

Data structure:

```
[
    {
        "studentname": "Nguyen Hoang Nam",
        "teacher": "Le Kim Tung",
        "time": "2022-08-10 08:00:00"
    },
    {
        "studentname": "Nguyen Toan",
        "teacher": "Le Kim Tung",
        "time": "2022-08-10 08:00:00"
    },
    {
        "studentname": "Nguyen Phuong",
        "teacher": "Nguyen Duy Anh",
        "time": "2022-08-10 14:00:00"
    },
    {
        "studentname": "Tran Nam",
        "teacher": "Nguyen Duy Anh",
        "time": "2022-08-10 14:00:00"
    }
]
```

3. students.json

Contain a list of students. Each student will have the following entry:

- Name of student
- Name of parent or guardian
- Name of responsible teacher
- Marks of 3 subjects
- Study the progress of the student, which is evaluated by the responsible teacher

Data structure:

```
[
    {
        "name": "Nguyen Hoang Nam",
        "mark": {
            "math": 10,
            "physic": 7,
            "chemist": 6
        },
        "parents": "Tran Duy Anh",
        "progress": "60",
        "teachername": "Le Kim Tung"
    },
    {
        "name": "Nguyen Hoang A",
        "mark": {
            "math": 5,
            "physic": 7,
            "chemist": 8
        },
        "parents": "Tran Toan",
        "progress": "80",
        "teachername": "Le Kim Tung"
    },
    {
        "name": "Nguyen Hoang V",
        "mark": {
            "math": 6,
            "physic": 8,
            "chemist": 8
        },
        "parents": "Le Kim Tung",
        "progress": "30",
        "teachername": "Tran Duy A"
    },
    {
        "name": "Nguyen Hoang S",
```

```
        "mark": {
            "math": 9,
            "physic": 5,
            "chemist": 7
        },
        "parents": "Tran Duc",
        "progress": "50",
        "teachername": "Tran Duy A"
    }
]
```

4. resources.json

Contain study resources. Each subject includes the following topics:

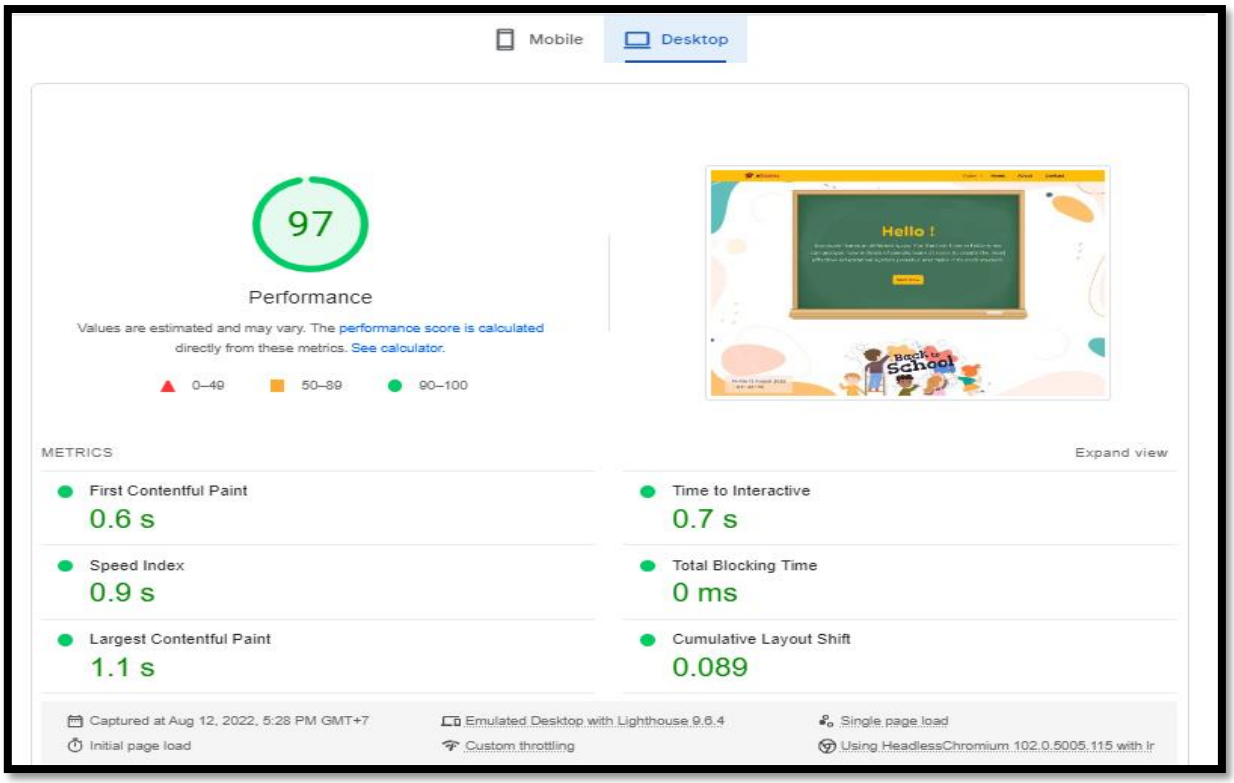
- Subject name
- Link
- Lesson title

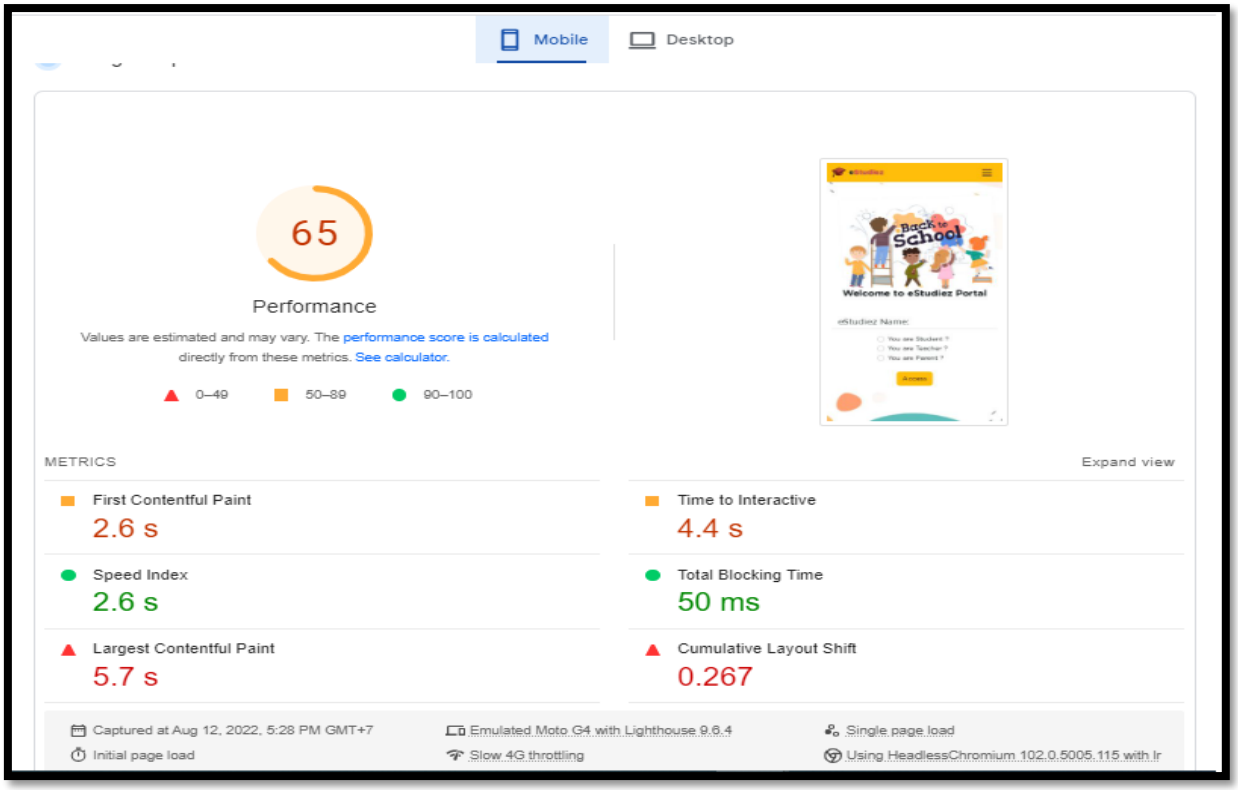
Data structure:

```
[
    {
        "subject": "Math",
        "url": "http://esdudiez.edu.vn/asdsfgjsg",
        "title": "Exercise 2"
    },
    {
        "subject": "Physic",
        "url": "http://esdudiez.edu.vn/asdhjkjsg",
        "title": "Exercise 5"
    },
    {
        "subject": "Chemist",
        "url": "http://esdudiez.edu.vn/acvnfgjsg",
        "title": "Task 4"
    },
    {
        "subject": "Practice",
        "url": "http://esdudiez.edu.vn/xvbnvgjsg",
        "title": "Document 1"
    }
]
```

STRESS TEST REQUEST

```
AkaDuc@DESKTOP-HOUADTQ c:\xampp
# "C:\xampp\apache\bin\abs.exe" -n 1000000 http://localhost/123/Techwiz2022/index.html?#!/
This is ApacheBench, Version 2.3 <$Revision: 1879490 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/

Benchmarking localhost (be patient)
Completed 100000 requests
Completed 200000 requests
Completed 300000 requests
Completed 400000 requests
Completed 500000 requests
Completed 600000 requests
Completed 700000 requests
Completed 800000 requests
Completed 900000 requests
Completed 1000000 requests
Finished 1000000 requests


Server Software:        Apache/2.4.53
Server Hostname:        localhost
Server Port:            80

Document Path:          /123/Techwiz2022/index.html?#!/
Document Length:        326 bytes

Concurrency Level:      1
Time taken for tests:   166.224 seconds
Complete requests:      1000000
Failed requests:        0
Non-2xx responses:      1000000
Total transferred:      533000000 bytes
HTML transferred:       326000000 bytes
Requests per second:    6015.97 [#/sec] (mean)
Time per request:       0.166 [ms] (mean)
Time per request:       0.166 [ms] (mean, across all concurrent requests)
Transfer rate:          3131.36 [Kbytes/sec] received

Connection Times (ms)
              min  mean[+/-sd] median   max
Connect:        0    0   0.3      0       3
Processing:     0    0   0.2      0       8
Waiting:        0    0   0.2      0       8
Total:          0    0   0.3      0       8

Percentage of the requests served within a certain time (ms)
  50%      0
  66%      0
  75%      0
  80%      0
  90%      1
  95%      1
  98%      1
  99%      1
 100%      8 (longest request)
```


Mobile
Desktop
97
Performance
Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.
0–49
50–89
90–100
Hello !
Back to School
METRICS
Expand view
First Contentful Paint
0.6 s
Time to Interactive
0.7 s
Speed Index
0.9 s
Total Blocking Time
0 ms
Largest Contentful Paint
1.1 s
Cumulative Layout Shift
0.089
Captured at Aug 12, 2022, 5:28 PM GMT+7
Initial page load
Emulated Desktop with Lighthouse 9.6.4
Custom throttling
Single page load
Using HeadlessChromium 102.0.5005.115 with lr


Mobile
Desktop
65
Performance
Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.
0–49
50–89
90–100
Back to School
Welcome to eStudiez Portal
METRICS
Expand view
First Contentful Paint
2.6 s
Time to Interactive
4.4 s
Speed Index
2.6 s
Total Blocking Time
50 ms
Largest Contentful Paint
5.7 s
Cumulative Layout Shift
0.267
Captured at Aug 12, 2022, 5:28 PM GMT+7
Initial page load
Emulated Moto G4 with Lighthouse 9.6.4
Slow 4G throttling
Single page load
Using HeadlessChromium 102.0.5005.115 with lr