project report

id : 19011329 name : Byul Han

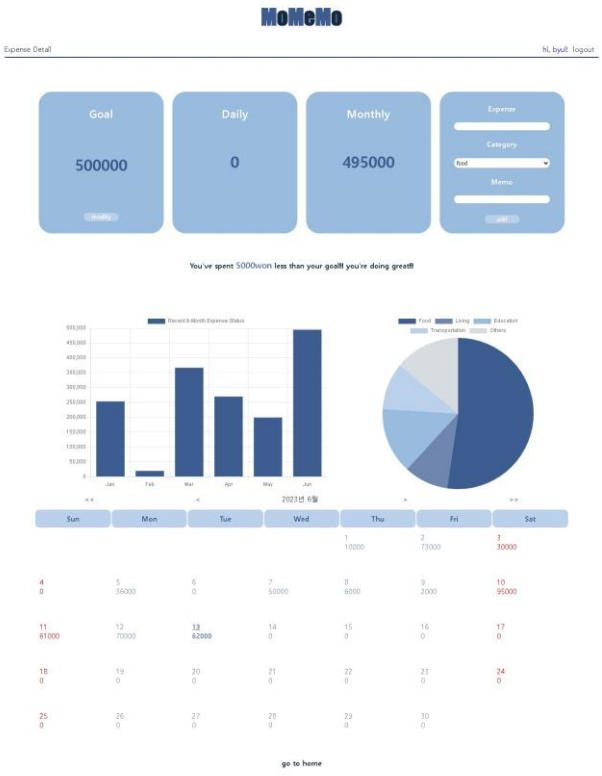
■ **Title** **:** MOMEMO – MOney, MEmory, meMO

■ **Objective :** Ojective of this webpage is user-specific expenditure management.

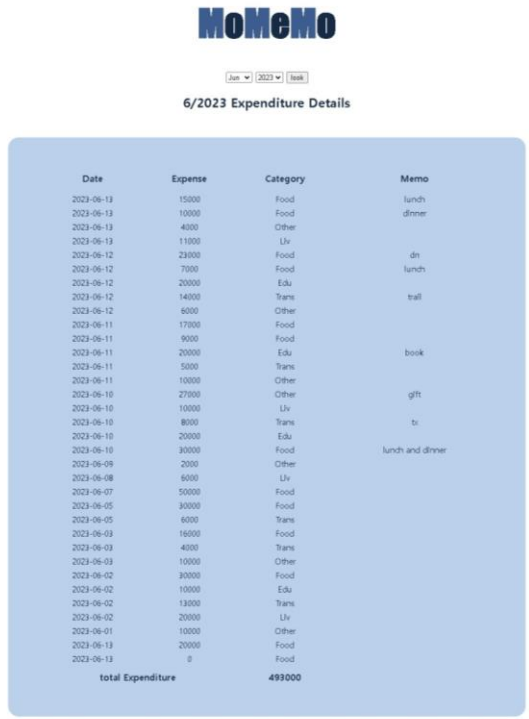
■ **Output**

<login page>

<signup page>



<mainpage>



<optional page (expanse detail)>

■ **Summery**

The main function of this webpage is financial ledger. There are some functions. First, user can set expanse goal of this month and can modify whenever. Secondly, user can add daily expenditure, category of expenditure and memo.

All input value is stored in database. As user add values, daily expenditure and monthly expenditure is updated. As a fun factor to motivate, different comment and image are displayed depending on the difference between the goal amount and the total monthly spending, and image is displayed when the mouse hovers over the comment. Third, user can see at glance the spending status of the last 6 months and the spending status by category through the chart. These charts are based on member's database. Also, if user set month and year, user can see all detailed expenditures for any month. Lastly, user's daily expenses are displayed on a calendar.

■ Database

```php
//member
$query='CREATE TABLE member(
    idx       INTEGER UNSIGNED NOT NULL AUTO_INCREMENT,
    id        VARCHAR(255)     NOT NULL,
    pw        VARCHAR(255)     NOT NULL,
    username  VARCHAR(255)     NOT NULL,

    PRIMARY KEY (idx)
)
ENGINE=MyISAM';
mysqli_query($db, $query) or die(mysqli_error($db));
```

```php
//today
$query="CREATE TABLE today(
    datei DATE NOT NULL,
    today INTEGER UNSIGNED NOT NULL,
    typei ENUM('Food', 'Edu', 'Tra', 'Liv', 'Oth') NOT NULL,
    userid VARCHAR(100) NOT NULL,
)
ENGINE=MyISAM";
mysqli_query($db, $query) or die(mysqli_error($db));
```

```php
//monthly_total
$query='CREATE TABLE monthly(
    datei DATE NOT NULL,
    monthly_total INTEGER UNSIGNED NOT NULL,
    goal INTEGER UNSIGNED NOT NULL,
    userid VARCHAR(100) NOT NULL,
)
ENGINE=MyISAM';
mysqli_query($db, $query) or die(mysqli_error($db));
```

```php
//daliy_total
$query='CREATE TABLE daily(
    datei DATE NOT NULL,
    daily_total INTEGER UNSIGNED NOT NULL,
    userid VARCHAR(255) NOT NULL,
)
ENGINE=MyISAM';
mysqli_query($db, $query) or die(mysqli_error($db));
```

```php
//type
$query='CREATE TABLE typei(
    datei DATE NOT NULL,
    food INTEGER UNSIGNED NOT NULL,
    edu INTEGER UNSIGNED NOT NULL,
    tra INTEGER UNSIGNED NOT NULL,
    liv INTEGER UNSIGNED NOT NULL,
    oth INTEGER UNSIGNED NOT NULL,
    userid VARCHAR(100) NOT NULL,
)
ENGINE=MyISAM';
mysqli_query($db, $query) or die(mysqli_error($db));
```

■ Code Description

GitHub repo : https://github.com/dogpowdragonpow/web_FinalProject_23_summer_19011329.git

- **Goal modification** (html 15%, php 75%, javascript 10%)

  1. press button(modify) -> 'goalmodify.php'

  2. input values, press button (modify) in 'goalmodify.php' -> values are passed to 'goalset.php'

  3. bring this month's goal data.

  4. If the data doesn't exist, insert new data(entered value). Or if the data exist, update data.

  'goalset.php'

```php
$query3 = "SELECT goal FROM monthly WHERE userid='$userid' AND YEAR(datei) = YEAR(DATE(NOW())) AND MONTH(datei) = MONTH(DATE(NOW()))";
$result3=mysqli_query($db,$query3) or die(mysqli_error($db));
while($row=mysqli_fetch_array($result3)){
   extract($row);
```

```php
if (isset($goal)) {
    $query2 = "UPDATE monthly SET goal = $goalset
               WHERE userid='$userid' AND YEAR(datei) = YEAR(CURRENT_DATE()) AND MONTH(datei) = MONTH(CURRENT_DATE())";
    mysqli_query($db, $query2) or die(mysqli_error($db));
}
else{
    $query2="INSERT INTO monthly (datei, monthly_total, goal, userid) VALUES (CURRENT_DATE(), 0, '$goalset', '$userid')";
    mysqli_query($db,$query2) or die(mysqli_error($db));
```

- **Daily input** (html 15%, php 80%, javascript 5%)

  1. user input expense, category, memo and press add button

  2. values are passed to 'dailyset.php'

  3. insert new data in 'today' table

'dailyset.php' ->

```php
$query="INSERT INTO today
    (datei, today, typei, userid, memo)
    VALUES
    (CURRENT_DATE(), '$expense', '$select_type', '$userid', '$memo')";
mysqli_query($db,$query) or die(mysqli_error($db));
```

  4. update data (if data exist already) or insert new data(if data doesn't exist) in 'daily' tabla, 'monthly' table, 'typei' table. (similar to the goalset method)

- **Comment** (html 15%, php 5%, javascript 80%)

  I create this using getElementById and appendChild (javascript). And to get php value, I use session.

```php
var goal = <?php echo $_SESSION['goal']?>;
var mt = <?php echo $_SESSION['mt']?>;
```

'MainPage.php'

```javascript
if(diff>0){
    document.getElementById('diff').innerHTML = 'You\'ve spent ';
    document.getElementById('diff1').innerHTML = diff+'won';
    document.getElementById('diff2').innerHTML=' less than your goal!! you\'re doing great!!';

    document.getElementById('diff1').addEventListener('mouseover',function(event){
        document.getElementById('img').appendChild(img);
    },false)
    document.getElementById('diff1').addEventListener('mouseout',function(event){
        document.getElementById('img').innerHTML="";
    },false)
```

- **Charts** (html 10%, php 45%, javascript 45%)

  I use chart.js (https://www.chartjs.org/). I wrote an code reffering to the blog (https://eunyoe.tistory.com/60), and chaged the style and data values.

```html
<script src="https://cdn.jsdelivr.net/npm/chart.js@3.5.1/dist/chart.min.js"></script>
```

  In bar chart, I changed the x-axis vlues of the bar-chart to show the last 6 months regardless of the year. (e.g. 22/10~23/3) and pulled the data for each month from the database and put it into the data in the chart. In order to insert data into the chart, I saved the data in an array and saved the array in the session. (the code for the pie-chart is also simillar to the bar-chart. - 'type-chart.php')

```php
<div class='chart'>
    <div class='barchart'><?php include 'month-chart.php' ?></div>
    <div class='piechart'><?php include 'type-chart.php' ?></div>
```

'MainPage.php'

```php
$query = "SELECT monthly_total
FROM monthly
WHERE
    userid='$userid'
    AND YEAR(datei) = (YEAR(CURRENT_DATE())-1) AND MONTH(datei) = $i";
$result=mysqli_query($db,$query) or die(mysqli_error($db));
$row=mysqli_fetch_array($result);
if(!isset($row['monthly_total'])) $data[$cnt]=0;
else $data[$cnt]=$row['monthly_total'];
$cnt++;
```

'monthly-chart.php'

```
<script>
var now = new Date();   //now
var month = now.getMonth(); //month-1
const months = ["Jan","Feb","Mar","Apr","May","Jun","Jul","Aug","Sep","Oct","Nove","Dec"];
var labels=[];
var m=month;
for(i=5;i>=0;i--){
    labels[i]=m;
    m=m-1;
    if(m==-1) m=11;
}
var chartArea = document.getElementById('dayChart').getContext('2d');
var dayChart = new Chart(chartArea, {
    type: 'bar',
    data: {
        labels: [months[labels[0]],months[labels[1]],months[labels[2]],months[labels[3]],months[labels[4]],months[labels[5]]],
        datasets: [{
            label: 'Recent 6-Month Expense Status',
            data: [<?php $Data = unserialize($_SESSION['data']); echo $Data[0];?>,
                   <?php $Data = unserialize($_SESSION['data']); echo $Data[1];?>,
                   <?php $Data = unserialize($_SESSION['data']); echo $Data[2];?>,
                   <?php $Data = unserialize($_SESSION['data']); echo $Data[3];?>,
                   <?php $Data = unserialize($_SESSION['data']); echo $Data[4];?>,
                   <?php $Data = unserialize($_SESSION['data']); echo $Data[5];?>],
            backgroundColor: 'rgb(61,93,144)', //rgba(255, 99, 132, 0.6)
            borderColor: 'rgb(61,93,144)',
            borderWidth: 0,
        }]
    },
    options: {
        responsive: false,
        scales: {
            y: {
                beginAtZero: true
            }
        }
    }
```

- **Calender** (html 20%, php 80%, javascript 0%)

I wrote an code reffering to the blog (https://cnisoft.tistory.com/237) and chaged the style. also I put the data value into the calender.

'MainPage.php'

```
<?php include 'schedule.php' ?>
```

To display the amount of expenditure by date on the calender, I used array and session just like I did when putting the data into the chart. Unfortunately, displaying the daily expenditure for the past month is too difficult and complicated, so I wrote the code to only do it for the current month.

'schedule.php'

```
<?php
session_start();
$db = mysqli_connect('localhost', 'root', '') or die('unable to connect.');
mysqli_select_db($db, 'momemo') or die (mysqli_error($db));

//---- 오늘 날짜
$thisyear = date('Y'); // 4자리 연도
$thismonth = date('n'); // 0을 포함하지 않는 월
$today = date('j'); // 0을 포함하지 않는 일

//------ $year, $month 값이 없으면 현재 날짜
$year = isset($_GET['year']) ? $_GET['year'] : $thisyear;
$month = isset($_GET['month']) ? $_GET['month'] : $thismonth;
$day = isset($_GET['day']) ? $_GET['day'] : $today;

$prev_month = $month - 1;
$next_month = $month + 1;
$prev_year = $next_year = $year;
if ($month == 1) {
    $prev_month = 12;
    $prev_year = $year - 1;
} else if ($month == 12) {
    $next_month = 1;
    $next_year = $year + 1;
}
$preyear = $year - 1;
$nextyear = $year + 1;

$predate = date("Y-m-d", mktime(0, 0, 0, $month - 1, 1, $year));
$nextdate = date("Y-m-d", mktime(0, 0, 0, $month + 1, 1, $year));


$last_day = date('t', mktime(0, 0, 0, $month, 1, $year));
$start_week = date("w", mktime(0, 0, 0, $month, 1, $year));
$total_week = ceil(($last_day + $start_week) / 7);
$last_week = date('w', mktime(0, 0, 0, $month, $last_day, $year));
```

<values needed to display the data on calender>

```
// daily total 계산
    $cnt=0;
    for($i=0;$i<$last_day;$i++){$sch[$i]=0;}

    if(isset($_SESSION['userid'])){
    $userid=$_SESSION['userid'];
    for($i=1;$i<=$last_day;$i++){
        $query = "SELECT daily_total
                FROM daily
                WHERE
                    userid='$userid'
                    AND YEAR(datei) = YEAR(CURRENT_DATE())
                    AND MONTH(datei) = MONTH(DATE(NOW()))
                    AND DAY(datei) = $i";
        $result=mysqli_query($db,$query) or die(mysqli_error($db));
        $row=mysqli_fetch_array($result);
        if(!isset($row['daily_total'])) $sch[$cnt]=0;
        else $sch[$cnt]=$row['daily_total'];
        $cnt++;
    }
}
    $_SESSION['sch'] = serialize($sch);
```

<get total expenditure by date from database>

```php
if($year == $thisyear && $month == $thismonth){ // if it is this month, year
    //display date and data
    if ($day == date("j")) {//if it is today
        echo "<span style='color:rgb(111,135,174); font-weight: bolder;'>"
        .'<span style="text-decoration: underline;">'.$day.'</span>'."<br/>".$Sch[$day-1]."</span>";
    } else {//it is not today
        echo "<span style='color:rgb(111,135,174);'>".$day."<br/>".$Sch[$day-1]."</span>";
    }
}
else{ // is not this month, year
    //display only date
    if ($day == date("j")) {
        echo "<span style='color:rgb(22,42,70); font-weight: bolder;'>"
        .'<span style="text-decoration: underline;">'.$day.'</span>'."</span>";
    } else {
        echo "<span style='color:rgb(22,42,70);'>".$day."</span>";
```

<part of the code to display the data – if it's a weekday>

- **Expense detail** (html 50%, php 50%, javascript 0%)

  After creating the table, I worked with table, I fetched the data and put it into the table values.

  'expense-detail.php'

```php
$month=date('n');
$year=date('Y');
if(isset($_POST['chmonth'])){
    $month=$_POST['chmonth'];
    $year=$_POST['chyear'];
}
echo '<h2>'.$month.'/'.$year.' Expenditure Details';

session_start();
$db = mysqli_connect('localhost', 'root', '') or die('unable to connect.');
mysqli_select_db($db, 'momemo') or die (mysqli_error($db));
$userid=$_SESSION['userid'];
$query="SELECT * FROM today WHERE userid='$userid' AND YEAR(datei) = $year AND MONTH(datei) = $month";
$result=mysqli_query($db,$query) or die(mysqli_error($db));
$num_row=mysqli_num_rows($result);

$query1="SELECT monthly_total FROM monthly WHERE userid='$userid' AND YEAR(datei) = $year AND MONTH(datei) = $month";
$result1=mysqli_query($db,$query1) or die(mysqli_error($db));
$row1=mysqli_fetch_array($result1)
```

```php
while ($row=mysqli_fetch_array($result)){
    extract($row);
    echo '<tr>';
    echo '<td>'.$datei.'</td>';
    echo '<td>'.$today.'</td>';
    echo '<td>'.$typei.'</td>';
    echo '<td>'.$memo.'</td>';
    echo '</tr>';
}
```

■ Conclusion

I left out the settlement caculator to focus on the financial account book functinon. Instead I added page that can see detailed expenditure. I've implemented almost all the functions I wanted to implement, but there are a few things I'm missing. First, If I see next or prev month, next month calender have to be showed in place(MainPage.php), but it is showed in snother page. so I add home buttom to go back mainpage. Second, I want to display the daily expenditures on the calender of previous month as well, but It is complicate to implement that function using method I used. So only the current month is possible.

■ Contribution

calender – (https://cnisoft.tistory.com/237 /) & chart – chart.js (https://www.chartjs.org/), blog(https://eunyoe.tistory.com/60)