

Submission Worksheet

Submission Data

Course: IT202-450-M2025

Assignment: IT202 PHP Multi-Dimension Problems

Student: Nathanael G. (ng569)

Status: Submitted | **Worksheet Progress:** 100%

Potential Grade: 1000.00/1000.00 (100.00%)

Received Grade: 0.00/1000.00 (0.00%)

Started: 7/12/2025 12:38:17 AM

Updated: 7/12/2025 1:00:41 AM

Grading Link: <https://learn.ethereallab.app/assignment/v3/IT202-450-M2025/it202-php-multi-dimension-problems/grading/ng569>

View Link: <https://learn.ethereallab.app/assignment/v3/IT202-450-M2025/it202-php-multi-dimension-problems/view/ng569>

Instructions

- Overview Link: <https://youtu.be/jd5giyXReal>
- 1. Ensure you read all instructions and objectives before starting.
- 2. Create a new branch from dev called M6-Homework
 - 1. `git checkout dev` (ensure proper starting branch)
 - 2. `git pull origin dev` (ensure history is up to date)
 - 3. `git checkout -b M6-Homework` (create and switch to branch)
- 3. Copy the template code from here: [GitHub Repository - M6 Homework](#)
 - It includes Problems 1-3 and `base.php`. Put all into an M6 folder or similar inside your `public_html`
 - Immediately record to history
 - `git add public_html`
 - `git commit -m "adding M6 HW baseline files"`
 - `git push origin M6-Homework`
 - Create a Pull Request from M6-Homework to dev and keep it open
- 4. Fill out the below worksheet
 - Each Problem requires the following as you work
 - Ensure there's a comment with your UCID, date, and brief summary of how the problem was solved
 - Initial outline/plan of how you'll solve it via comments (add/commit after this stage)
 - Code solution (add/commit periodically as needed)
- 5. Once finished, click "Submit and Export"
- 6. Locally add the generated PDF to a folder of your choosing inside your repository folder and move it to Github
 - 1. `git add .`
 - 2. `git commit -m "adding PDF"`
 - 3. `git push origin M6-Homework`
 - 4. On Github merge the pull request from M6-Homework to dev
 - 5. On Github create a pull request from dev to prod and immediately merge. (This will trigger the prod deploy to make the heroku prod links work)

7. Upload the same PDF to Canvas

8. Sync Local

1. git checkout dev
2. git pull origin dev

Section #1: (250 pts.) Problem 1 - Subset

Progress: 100%

≡ Task #1 (250 pts.) - Edit the `processBirds` function to extract properties

Progress: 100%

Details:

- Only make edits where noted via provided comments
- Challenge: Extract the name, color, region of each bird into the \$subset array
- Step 1: sketch out plan using comments (include ucid and date)
- Step 2: Add/commit your outline of comments (required for full credit)
- Step 3: Add code to solve the problem (add/commit as needed)

Part 1:

Progress: 100%

Details:

Two screenshots are expected

1. Snippet of relevant code showing solution (with ucid/date comment)
2. Full output of executing the program (visit the proper file on Heroku dev after a manual deploy)


```
function processBirds($birds) {
  processBirds.extract($birds);
  return "this is a test";
}

// TODO: Use the $birds variable to extract name, color, region into $subset array
// TODO: Extract the name, color, region into a separate array structure called $subset
$subset = []; // subset array
// TODO: Use the $subset array to get each bird's name, color, and region and add that into the subset array
$loop = 0;
for ($i = 0; $i < count($birds); $i++) {
  if ($birds[$i][1] == "name") {
    $loop["name"] = $birds[$i][2];
  }
  if ($birds[$i][1] == "color") {
    $loop["color"] = $birds[$i][2];
  }
  if ($birds[$i][1] == "region") {
    $loop["region"] = $birds[$i][2];
  }
  array_push($subset, $loop);
}
// END LOOP
return "this is a test";
}
```

VS Code for problem 1



Heorku Output

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Part 2:

Progress: 100%

Details:

- Direct link to the file in the homework related branch from Github (should end in `.php`)
- Direct link to the file on Heroku Prod (Just grab the base prod url and manually enter the path to the file)

URL #1

https://github.com/Nate-Gaw/ng569-IT202-450-M6-Homework/public_html/M6/problem1.php



URL
<https://github.com/Nate-Gaw/ng5>




URL #2

<https://ng569-it202-450-prod-3272507b1c51.herokuapp.com/problem1.php>



URL
<https://ng569-it202-450-prod-327>



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Part 3:


Progress: 100%

Details:

Briefly explain `how` the code solves the challenge (note: this isn't the same as `what` the code does)

Your Response:

First I used a for loop to loop through each array in order to access each one. Then I check if any of the keys im looking for are empty. If not, then I extract the data and place it into a temp array which I append to the end of the final array.

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Section #2: (250 pts.) Problem 2 - Adding Properties

Progress: 100%

Task #1 (250 pts.) - Edit the `processCars` function to add

Details:

- Only make edits where noted via provided comments
- Challenge 1: Add a new property called age that's set from today's year and the car's year
- Challenge 2: Add a new property called isClassic that's true/false based on \$classic_age
- Step 1: sketch out plan using comments (include ucid and date)
- Step 2: Add/commit your outline of comments (required for full credit)
- Step 3: Add code to solve the problem (add/commit as needed)

Part 1:

Details:

Two screenshots are expected

1. Snippet of relevant code showing solution (with ucid/date comment)
2. Full output of executing the program (visit the proper file on Heroku dev after a manual deploy)

```
function processCars($cars) {
  // TODO: Add logic to create a new array ($processedCars) with original properties plus age and isClassic. isClassic is a boolean based on today's year &
  // $classic_age.
  // Hint: use the $cars variable to iterate over, don't directly touch $cars.
  $processedCars = []; // result array
  $todayYear = 2024; // Use current year
  $classicAge = 40; // how many years old is a classic?
  // Loop through $cars
  // There is a loop that iterates through the cars variable and copy everything initially in the array. Then add in the age by taking $todayYear - $car['year'] to get the age.
  // Then using logic to compare the age to the classic age to see if the car is a classic.
  $age = 0;
  $isClassic = false;
  for ($i = 0; $i < count($cars); $i++) {
    $car = $cars[$i];
    $age = $todayYear - $car['year'];
    if ($age >= $classicAge) {
      $isClassic = true;
    }
    $processedCars[] = [
      'make' => $car['make'],
      'model' => $car['model'],
      'year' => $car['year'],
      'age' => $age,
      'isClassic' => $isClassic,
    ];
  }
  return $processedCars;
}
```

VS Code for problem 2

```
function processCars($cars) {
  // TODO: Add logic to create a new array ($processedCars) with original properties plus age and isClassic. isClassic is a boolean based on today's year &
  // $classic_age.
  // Hint: use the $cars variable to iterate over, don't directly touch $cars.
  $processedCars = []; // result array
  $todayYear = 2024; // Use current year
  $classicAge = 40; // how many years old is a classic?
  // Loop through $cars
  // There is a loop that iterates through the cars variable and copy everything initially in the array. Then add in the age by taking $todayYear - $car['year'] to get the age.
  // Then using logic to compare the age to the classic age to see if the car is a classic.
  $age = 0;
  $isClassic = false;
  for ($i = 0; $i < count($cars); $i++) {
    $car = $cars[$i];
    $age = $todayYear - $car['year'];
    if ($age >= $classicAge) {
      $isClassic = true;
    }
    $processedCars[] = [
      'make' => $car['make'],
      'model' => $car['model'],
      'year' => $car['year'],
      'age' => $age,
      'isClassic' => $isClassic,
    ];
  }
  return $processedCars;
}
```

Heroku Output

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Part 2:

Details:

- Direct link to the file in the homework related branch from Github (should end in `.php`)
- Direct link to the file on Heroku Prod (Just grab the base prod url and manually enter the path to the file)

URL #1

https://github.com/Nate-Gaw/ng569-IT202-450-M6-Homework/public_html/M6/problem2.php

URL

https://github.com/Nate-Gaw/ng569-IT202-450-M6-Homework/public_html/M6/problem2.php

**URL #2**

<https://ng569-it202-450-prod-3272507b1c51.herokuapp.com/M6/problem2.php>

URL

<https://ng569-it202-450-prod-3272507b1c51.herokuapp.com/M6/problem2.php>



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Part 3:

Progress: 100%

Details:

Briefly explain **how** the code solves the challenges (note: this isn't the same as **what** the code does)

Your Response:

First I use a for loop in order to loop through each array. Then I use a foreach loop in order to grab the key and data within the array. Then by looping through each item, I'm able to find if the key is labeled "year" then find the age based on the year of the car model. Then if it's greater than the specified age, I can deduce if the car is classic or not. Then I save the age and if the car is a classic and add that as an array to the end of the final array.



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Section #3: (250 pts.) Problem 3 - Join

Progress: 100%

Task #1 (250 pts.) - Edit the `joinArrays` function to combine two arrays based on a common key

Progress: 100%

Details:

- Only make edits where noted via provided comments
- Challenge: Combine the data in both arrays by the `userId` property
- Step 1: sketch out plan using comments (include `ucid` and `date`)

- Step 2: Add/commit your outline of comments (required for full credit)
- Step 3: Add code to solve the problem (add/commit as needed)

Part 1:

Progress: 100%

Details:

Two screenshots are expected

1. Snippet of relevant code showing solution (with ucid/date comment)
2. Full output of executing the program (visit the proper file on Heroku dev after a manual deploy)

```
function joinArrays($users, $activities)
{
    printProblemTitle($users, $activities);
    echo "----- output -----";

    // Note: use the $users and $activities variables to iterate over; don't directly touch $u1-$u4 arrays
    // TODO: Objective: Add logic to join both arrays on the ucid property into one $joined array
    $joined = []; // result array
    // Start with $u1
    // Copy the users array into the joined array. Then check for the matching ucid and store the activities with the matching id in an array at the end
    $joined = $users;
    $act = [];
    for ($i = 0; $i < sizeof($joined); $i++) {
        $id = $joined[$i]['ucid'];
        for ($j = 0; $j < sizeof($activities); $j++) {
            if (strcmp($id, $activities[$j]['ucid']) == 0) {
                array_push($act, $activities[$j]['activity']);
            }
        }
        // Add all act ($j = 0; $j < sizeof($activities); $j++)
        array_push($joined[$i], $act);
        $act = [];
    }
    // End with $u4
    for ($i = 0; $i < sizeof($joined); $i++) {
        // End with $u4
        echo "-----" . $joined[$i] . "-----";
    }
}
```

VS Code for problem 3



Heroku Output

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Part 2:

Progress: 100%

Details:

- Direct link to the file in the homework related branch from Github (should end in `.php`)
- Direct link to the file on Heroku Prod (Just grab the base prod url and manually enter the path to the file)

<https://github.com/Nate-Gaw/ng569>

<https://github.com/Nate-Gaw/ng5>

IT2021450M6-

Homework/public_html/M6/problem3.php

URL #2

<https://nq569-it202-450->

prod-3272507b1c51.herokuapp.com/problem3.php

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⇒ Part 3:

Progress: 100%

Details:

Briefly explain **how** the code solves the challenges (note: this isn't the same as **what** the code does)

Your Response:

I copied the users array to the joined, since we wanna keep everything and loop over the joined array. Then I extract the userId from the array and check it accross the activities array. If the activity has the same Id, then I copy over the information into a temp array, whcih then gets copied over to the joined array once done.



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Section #4: (250 pts.) Misc

Progress: 100%

Task #1 (83.33 pts.) - Github Details

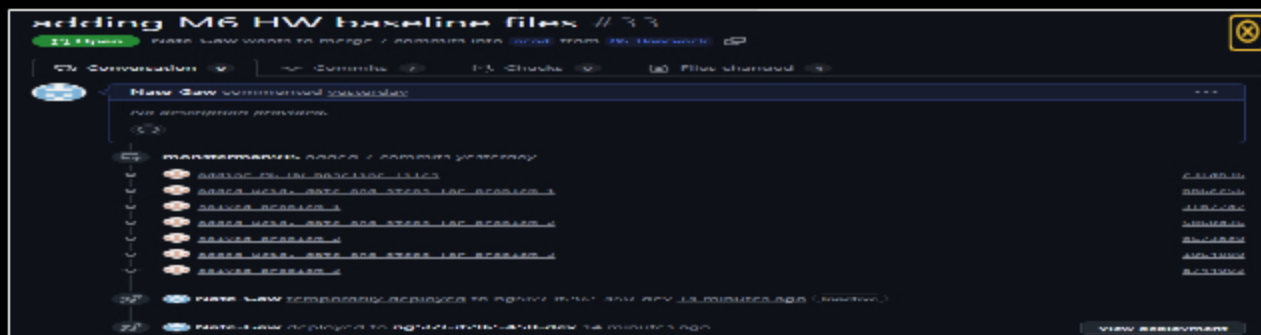
Progress: 100%

Part 1:

Progress: 100%

Details:

From the Commits tab of the Pull Request screenshot the commit history Following minimum should be present





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Part 2:

Progress: 100%

Details:Include the link to the Pull Request (should end in `/pull/#`)**URL #1**<https://github.com/Nate-Gaw/ng569-IT202-450>

URL

<https://github.com/Nate-Gaw/ng569-IT202-450>

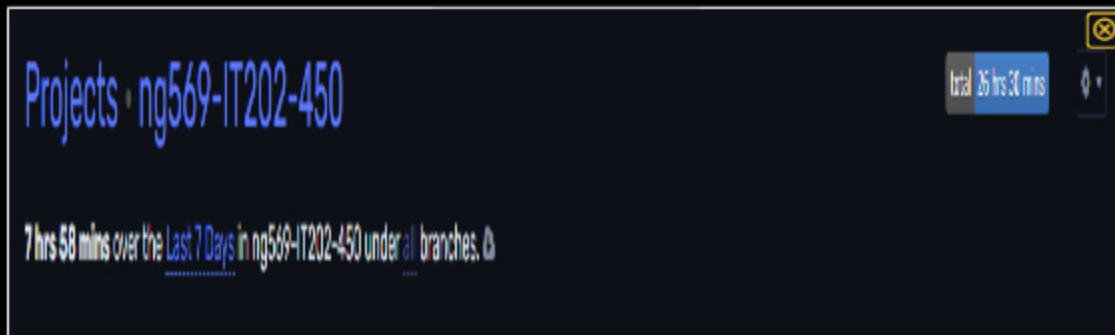
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Task #2 (83.33 pts.) - WakaTime - Activity

Progress: 100%

Details:

- Visit the WakaTime.com Dashboard
- Click **Projects** and find your repository
- Capture the overall time at the top that includes the repository name
- Capture the individual time at the bottom that includes the file time
- Note: The duration isn't relevant for the grade and the visual graphs aren't necessary



Waketime



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Task #3 (83.33 pts.) - Reflection

Progress: 100%

⇒ Task #1 (0.33 pts.) - What did you learn?

Progress: 100%

Details:

Briefly answer the question (at least a few decent sentences)

Your Response:

I learned how to access multidimensional arrays in php. I had to look up a couple of things, such as array manipulation and multidimensional array manipulation and how strcmp works. Other than that, I also refreshed on my php, since I have been working on JS for the past week so it was good to get back to something I was getting pretty decent at.



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⇒ Task #2 (0.33 pts.) - What was the easiest part of the assignment?

Progress: 100%

Details:

Briefly answer the question (at least a few decent sentences)

Your Response:

The easiest part of the assignment was the structuring. Especially for problem 3, the structure was very easy to conceive in my brain, but fairly difficult to execute, since coding is not always straightforward. And since I've used multidimensional arrays in many other programming languages, using them wasn't so hard and came pretty naturally.



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⇒ Task #3 (0.33 pts.) - What was the hardest part of the assignment?

Progress: 100%

Details:

Briefly answer the question (at least a few decent sentences)

Your Response:

The hardest part of the assignment was making things more efficient. Even at this stage, it's not efficient at all and definitely needs improvement to save memory. But since memory isn't so much of an issue, I figure it does the job, and I didn't wanna keep changing things just so I don't end up ruining my work.



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