Course: IT114-006-S2025
Assignment: IT114 JavaProblems
Student: Muhammad K. (muk)
Status: Submitted | Worksheet Progress: 100.00%
Potential Grade: 10.10/10.00 (101.00%)
Received Grade: 0.00/10.00 (0.00%)
Grading Link: https://learn.ethereallab.app/assignment/v3/IT114-006-S2025/it114-java-problems/grading/muk

Instructions

1. Ensure you read all instructions and objectives before starting.
2. Create a new branch from `main` called `M2-Homework`
    1. `git checkout main` (ensure proper starting branch)
    2. `git pull origin main` (ensure history is up to date)
    3. `git checkout -b M2-Homework` (create and switch to branch)
3. Copy the template code from here: GitHub Repository - M2 Homework
    - It includes Problems 1-4 and a BaseClass. Put all into an `M2` folder or similar (adjust `package` reference at the top if you chose a different folder name).
    - Immediately record to history
        - `git add .`
        - `git commit -m "adding M2 HW baseline files"`
        - `git push origin M2-Homework`
        - Create a Pull Request from `M2-Homework` to `main` 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 M2-Homework`
    4. On Github merge the pull request from `M2-Homework` to `main`
7. Upload the same PDF to Canvas
8. Sync Local
    1. `git checkout main`
    2. `git pull origin main`

Section #1: (2 pts.) Problem 1 - Odds

Task #1 (2 pts.) - Edit the `printOdds` method to output odd values

Combo Task:

Weight: *100%*
Objective: *Edit the `printOdds` method to output odd values of the array*

Details:

- Only make edits where noted via provided comments
- Challenge: Print odd values only in a single line separated by commas
- 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)

Item:#1

Weight: *40%*

Details:
Two screenshots are expected

1. Snippet of relevant code showing solution (with ucid/ date comment)
2. Full output of executing the program

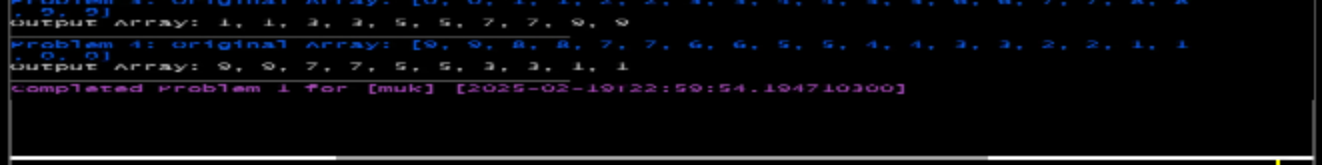
Image Prompt

```
        // Step 2: Add/commit your outline of comments (required for full credit)
        // Step 3: Add code to solve the problem (add/commit as needed)
        System.out.print(s:"Output Array: ");
        // Start Solution Edits
                                                //Ucid - muk
        String commas = "";                     //date - 2/13/25
        for (int i = 0; i < arr.length; i++) {  //Iterate over arr
            if (arr[i] % 2 != 0){               // check if value is odd
                System.out.print(commas + arr[i]);      // print value
                commas = ", ";                          // seperated by commas
        }
        }

        // End Solution Edits
        System.out.println(x:"");
        System.out.println(x:"_____________________________________________");
    }
```

Shows the Solution with ucid/date comment

```
19/d29Muhammad-ubaid MINGW64 ~/NJIT/2025/IT114/muk-IT114-006 (M2-Homework)
$ java M2/Problem1
Running Problem 1 for [muk] [2025-02-19T22:59:54.120614500]
Objective: Print out only odd values in a single line separate by commas
Problem 1: original Array: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
Output Array: 1, 3, 5, 7, 9
_____
Problem 2: Original Array: [9, 8, 7, 6, 5, 4, 3, 2, 1, 0]
Output Array: 9, 7, 5, 3, 1
```



Show full output of executing the program

Saved: 2/19/2025 11:57:08 PM

Item:#2

Weight: *20%*

Details:
Direct link to the file in the homework related branch from Github (should end in `.java`)

Url Prompt

URL #1
https://github.com/MuhammadKhan621/muk-IT114-006/blob/M2-Homework/M2/Problem1.java

URL
https://github.com/MuhammadKha

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Item:#3

Weight: *40%*

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

Text Prompt

Your Response:

As the code iterates through arr, the if statement checks if the numbers are odd by doing % 2 != 0 to make sure the number is odd. The variable comma is used to add commas between each odd number.

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Section #2: (2 pts.) Problem 2 - Sum

Task #1 (2 pts.) - Edit the `sumValues` method to sum the array va

Combo Task:

Weight: *100%*
Objective: *Edit the `sumValues` method to sum the arrayvalues and present them in a format with exactly two decimal places*

Details:

- Only make edits where noted via provided comments
- Challenge 1: Sum all the values of the passed in arrayand assign to `total`
- Challenge 2: Have the sum be represented as a number with exactly 2 decimal
- Example: 0.1 would be shown as 0.10, 1 would be shown as 1.00, etc
- 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)

Item:#1

Weight: *40%*

Details:
Two screenshots are expected

1. Snippet of relevant code showing solution (with ucid/ datecomment)
2. Full output of executing the program

Image Prompt

Snippet of relevant code showing solution

Full output of executing the program

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Item:#2

Weight: *20%*

Details:
Direct link to the file in the homework related branch from Github (should end in `.java`)

Url Prompt

URL #1
https://github.com/MuhammadKhan621/muk-IT114-006/blob/M2-Homework/M2/Problem2.java

URL
https://github.com/MuhammadKha

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Item:#3

Weight: *40%*

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

Text Prompt

Your Response:

Iteration is done with a for loop to go through the array and add it all and equal to total.
DecimalFormat method is used to make sure the sums are in 2 decimal formats.

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Section #3: (2 pts.) Problem 3 - Conversion

Task #1 (2 pts.) - Edit the `bePositive` method to make each value

Combo Task:

Weight: *100%*
Objective: *Edit the `bePositive` method to make each value positive, convert it back to the orginal data type, and set it to the proper slot in the `output` array*

Details:

- Only make edits where noted via provided comments
- Challenge 1: Make each value positive
- Challenge 2: Convert the values back to their original data type and assign it to the proper slot of the `output` 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)

Item:#1

Weight: *40%*

Details:
Two screenshots are expected

1. Snippet of relevant code showing solution (with ucid/ date comment)
2. Full output of executing the program

Image Prompt

Snippet of relevant code

Full output of program

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Item:#2

Weight: *20%*

Details:
Direct link to the file in the homework related branch from Github (should end in `.java`)

Url Prompt

URL #1
https://github.com/MuhammadKhan621/muk-IT114-006/blob/M2-Homework/M2/Problem3.java

URL
https://github.com/MuhammadKha

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Item:#3

Weight: *40%*

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

Text Prompt

Your Response:

The code solves the challenge by checking each array value and turning any negative numbers into positive. Math.abs() was used to turn each array into positive. After that, the new values are put back into a new array, making sure the values stay like the original data type they were.

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Section #4: (2 pts.) Problem 4 - Strings

Task #1 (2 pts.) - Edit the `transformText` method to solve the cha

Combo Task:

Weight: *100%*
Objective: *Edit the `transformText` method to solve the challenges*

Details:

- Only make edits where noted via provided comments
- Challenge 1: Remove non-alphanumeric characters except spaces
- Challenge 2: Convert text to Title Case
- Challenge 3: Trim leading/trailing spaces and remove duplicate spaces
- Result 1-3: Assign final phrase to `placeholderForModifiedPhrase`
- 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)

Item:#1

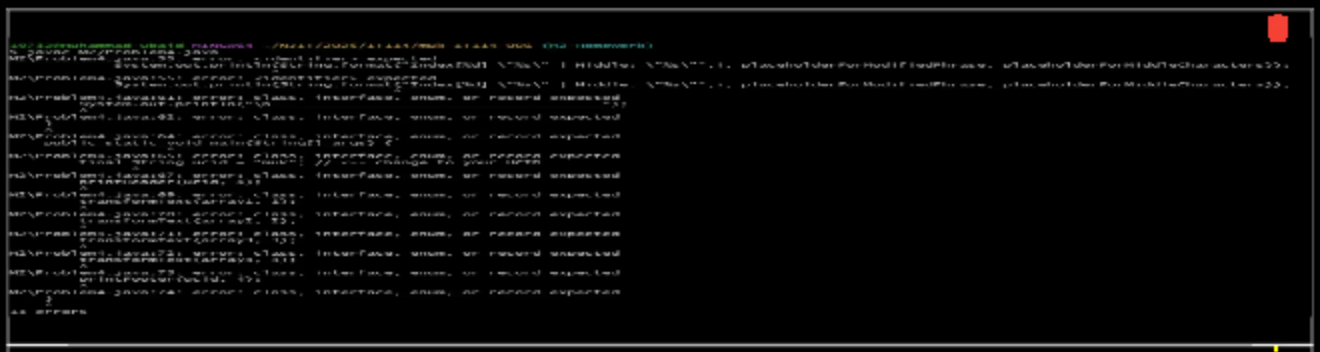
Weight: *40%*

Details:
Two screenshots are expected

1. Snippet of relevant code showing solution (with ucid/date comment)
2. Full output of executing the program

Image Prompt

Snippet of relevant code (challenge 2 is not complete) is shown



Full output of executing the program is shown BUT challenge 2 is not complete.

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Item:#2

Weight: *20%*

Details:

Direct link to the file in the homework related branch from Github (should end in `.java`)

Url Prompt

URL #1
https://github.com/MuhammadKhan621/muk-IT114-006/blob/M2-Homework/M2/Problem4.java

URL
https://github.com/MuhammadKha

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Item:#3

Weight: *40%*

Details:

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

Text Prompt

Your Response:

replaceAll() method is used to remove non-alpha numeric characters except spaces. For Challenge 2, I was unable to figure it all. For challenge 3 replaceAll() method is used again to trim leading/trailing spaces and remove duplicate spaces.

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Task #2 (+ 0.90 pts.) - Edit the `transformText` method to solve the

Combo Task:

Weight: *45%*
Objective: *Edit the `transformText` method to solve the extra credit challenge (challenge 4)*

Details:

- Only make edits where noted via provided comments
- Challenge 4: Extract middle 3 characters (beginning starts at middle of phrase)
- Assign result to 'placeholderForMiddleCharacters'
- If not enough characters assign "Not enough characters"
- 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)

Item:#1

Weight: *40%*

Details:
Two screenshots are expected

1. Snippet of relevant code showing solution (with ucid/date comment)
2. Full output of executing the program

Image Prompt

Missing Caption

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Item:#3

Weight: *50%*

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

Text Prompt

Your Response:

Missing Response

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Section #5: (2 pts.) Misc

Task #1 (0.67 pts.) - Github Details

Combo Task:

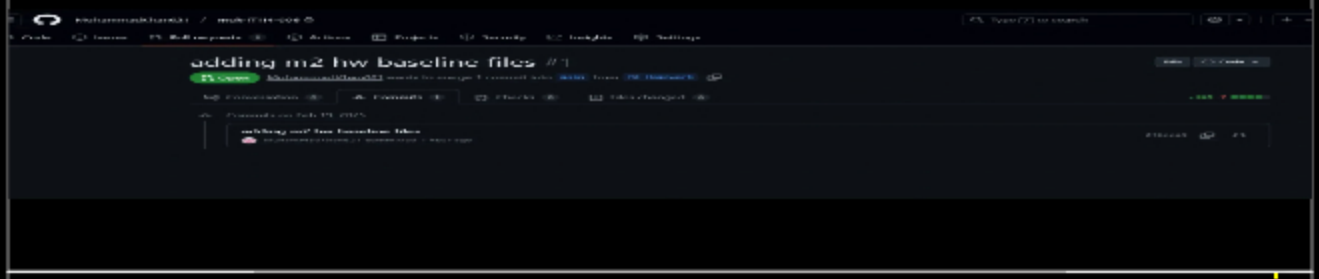
Weight: *33.33%*
Objective: *Github Details*

Item:#1

Weight: *60%*

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

Image Prompt



Showing I have my commit done.

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Item:#2

Weight: *40%*

Details:
Include the link to the Pull Request (should end in `/pull/#`)

Url Prompt

URL #1
https://github.com/MuhammadKhan621/muk-IT114-006/pull/1/commits

URL
https://github.com/MuhammadKha

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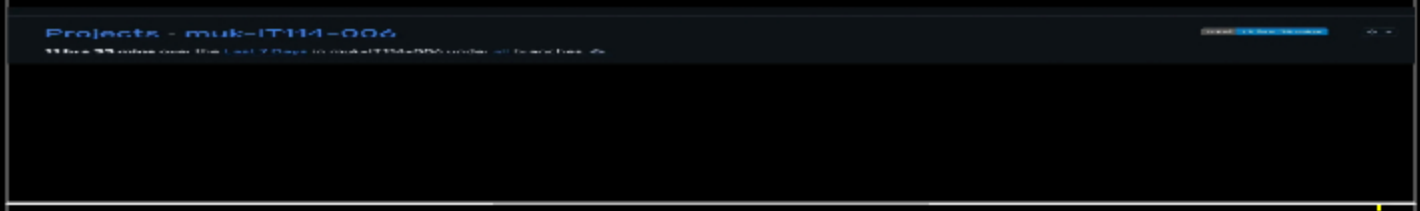
Task #2 (0.00 / 0.67 pts.) - WakaTime - Activity

Weight: *33.33%*
Objective: *WakaTime - Activity*

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

Image Prompt



Overall time is shown

Individual time is shown

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Task #3 (0.00 / 0.67 pts.) - Reflection

Sub-Tasks:

Task #1 (0.00 / 0.33 pts.) - What did you learn?

Weight: *33.33%*
Objective: *What did you learn?*

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

Text Prompt

Your Response:

For this assignment, I learned how to research different problem-solving methods. I also learned about how iterations work through arrays and how they are stored and edited. Different methods made it easy to perform some tasks. I also learned the struggle or frustration Programmers probably go through but not compared to the more difficult stuff they go through.

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Task #2 (0.00 / 0.33 pts.) - What was the easiest part of the a

Weight: *33.33%*
Objective: *What was the easiest part of the assignment?*

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

Text Prompt

Your Response:

The easiest part of the assignment was most definitely Problems 1 and 2. That is because they were more straightforwardproblems.

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Task #3 (0.00 / 0.33 pts.) - What was the hardest part of the

Weight: *33.33%*
Objective: *What was the hardest part of the assignment?*

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

Text Prompt

Your Response:

The hardest part of the assignment was HW 3 and 4. That is because 3 took me a while to complete, and hw 4, I got stuck on challenge 2. Problem 4, challenges 1, and 3 were not that hard because I was going to use methods to solve those, but in challenge 2, I got stuck after the iteration.

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