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| **Skill Test (Midterm)** | |
| **Course Code:** CpE 201L | **Program**: BSCpE |
| **Course Title:** Data Structures and Algorithms | **Date Performed:** September 6, 2025 |
| **Section:** 2-A | **Date Submitted:** September 6, 2025 |
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| 1. **Objectives** | |
| Enumerate the objective of the activity (at least 2)   1. Demonstrate the ability to implement arrays with various functions included in python 2. To apply prior knowledge gained in object-oriented programming | |
| **2. Discussion** | |
| Arrays are one of the more well known types of data structures due to its ability to store homogenous types of data, efficiency and faster execution speed. In this activity, the student is required to implement an array of even integers less than 50 but not less than 20 and be able to utitilize the various functions built in by python. | |
| **3. Materials and Equipment** | |
| The materials used in this activity include a desktop computer,which is required in order to use Google Colab with wireless connection. The python programming was used to implement the algorithm and operations required. | |
| **4. Procedure** | |
| 1. Define the functions that would execute the required operations: 2. Display the elements 3. Find the maximum element 4. Reverse the array 5. Define the original array with even integers less than 50 but not less than 20. Use the range function to get the integers with even numbers. 6. Use if else statements to enable the option to choose an operation that would be executed by the user. 7. Call the main function. | |
| **5. Output** | |
| This program executes the required operations,showcasing the usage of a few of the many built-in functions in python with the array data structure. | |
| 1. **Conclusion**   This activity demonstrates an understanding of the various types of data structures,their usage and purposes, advantages and disadvantages,and the utilization of built in functions by python. Overall, the student has managed to do so with prior knowledge despite the few mistakes made during the activity.  Please refer to this link:  [CPE-201L-DSA-2-A/Midterm\_Examination\_Skill\_Test\_(Practical)\_.ipynb at main · PaulJustinePolestico/CPE-201L-DSA-2-A](https://github.com/PaulJustinePolestico/CPE-201L-DSA-2-A/blob/main/Midterm_Examination_Skill_Test_(Practical)_.ipynb) | |
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