**Identify the Big-O Notation of the following Blocks of Codes**: (Identify and Discuss the Block of Codes' Structure which complies to the identified Notation)

const users = ["alice", "Bob", "Charlie", "Diane", "Eve"];

const getUserByID = (arr, index) => arr [index];

console.log(getUserByID(users, 2));

module.exports = {getUserByID};

The provided block of code retrieves a user from an array by a given index. The **Big-O Notation** for this code is **O(1)**, which stands for constant time complexity. This is because accessing an element in an array by its index is a direct operation that takes the same amount of time regardless of the array's size.

1. **Array Access**: The function getUserByID takes an array (arr) and an index (index) as parameters and directly accesses the element at that index in the array, which is a constant-time operation (**O(1)**).
2. **Complexity of Array Access**: Accessing an element by its index in an array is a fundamental operation supported directly by the data structure of arrays. It does not depend on the number of elements in the array but rather accesses the memory location directly.

const getUserByID = (arr, index) => arr[index];

1. **Console Log**: The console log statement also operates in constant time (**O(1)**) as it simply outputs the result of the function call.

In summary, the getUserByID function has a constant time complexity of **O(1)**, meaning it performs the same way no matter how large the array is. This makes it very efficient for retrieving individual elements by index.