Aror University of Art, Architecture, Design & Heritage Sukkur.

Department of Artificial Intelligence and Multimedia Gaming

Object Oriented Programming(Spring-2024)

LAB No. 2

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Objective of Lab No. 2:
After performing lab2, students will be able to:

- Create one Dimensional and Two-Dimensional Arrays of different data types
- Take input inside an array from the user
- Traverse a one Dimensional and Two-Dimensional Array
- Use Ternary Operator in java
- Understand equals and equalsIgnoreCase method
- Solve Real world problems using Arrays in java.

Lab Exercises:

1. **Write a java program which does the following:**
    a. Create an array of consonants in English alphabet using array Initializer, named as const_arr.
    b. Take a character value as an input from the user inside the variable user_inp.
    c. Check whether the value is present in the consonant array or not.

2. **Write down a java program which:**
    a. Declares an array of 10 integer elements and allocates memory to it.
    b. Takes input from the user for 10 times, and stores it inside the array.
    c. Now find out the multiples of 4 from this array, sum them and print the total.
3. **Write down the java program which does the following:**
    a. It takes the matrix dimensions as input from the user
    b. Creates a matrix of those dimensions
    c. Take the values as input from the user
    d. Sum up the values and display as show in the diagram below:

```
Input number of rows of matrix
2
Input number of columns of matrix
2
Input elements of first matrix
1
2
3
4
Input the elements of second matrix
5
6
7
8
Sum of the matrices:-
6       8
10      12
```

4. **Create an array of 6 string variables and do the following:**
    a. Take input from the user and populate the elements of array.
    b. Now check whether the name "Ali" is present in the array or not, just Ignore the case of alphabet.
5. **Create the following matrix in java:**

1 1 0 0 1
1 0 1 0 1
1 0 0 1 1
1 0 0 0 1

Now check whether this matrix contains the letter 'N' or not.

6. **Use ternary operator to check eligibility for voting:**
    a. Take age as input from the user.
    b. Check if the age of user is 18 or older, then the user is eligible for voting.
    c. If the user is younger than 18 years, then display you are not eligible.

7. **Write down the java program to find the smallest and largest element from the array, now check whether the largest element which you found is multiple of 2 or not.**