

Day 47 coding Statement : Write Program to find longest palindrome in an array

Description : Get an array as the input from the user and find the longest palindrome in that array.

Input : Enter the size of array

3

Enter the elements of array

121 10456 1000001

Output : 1000001

Program :

```
package com.talentbattle.codingchallenge;

import java.util.Scanner;

public class Longest_palindrome {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the length of Array");
        int n = scan.nextInt();
        int arr[] = new int[n];
        int check = 0;
        int max = 0;
        System.out.println("Enter the Arrray Elements : ");
        for(int i = 0; i <= arr.length - 1; i++ )
        {
            arr[i] = scan.nextInt();
        }
        for(int i = 0; i <= arr.length - 1; i++)
        {
            check = palindrome(arr[i],check);
            //System.out.println(check);
            if(arr[i] == check)
            {
                if(arr[i] > max)
                {
                    max = arr[i];
                }
            }
        }
        System.out.println("Longest Palindrome is " + max);
    }

    private static int palindrome(int j, int rev) {
```

```

        // TODO Auto-generated method stub
        int rem = 0;
        rev = 0;
        while(j != 0)
        {
            rem = j %10;
            rev = (rev*10) + rem;
            j = j/10;
        }
        return rev ;
    }
}

```

The screenshot shows the Eclipse IDE with the following components:

- Project Explorer:** Lists various Java programs, including 'Longest_palindrome.java' which is currently selected.
- Editor:** Displays the code for 'Longest_palindrome.java'. The code includes a main method that prompts the user for the length of an array and its elements, then iterates through the array to find the longest palindrome. A private static method 'palindrome' is used to check if a number is a palindrome by reversing its digits.
- Console:** Shows the output of the program. It displays the prompts 'Enter the length of Array' and 'Enter the Array Elements :', followed by the input '121 10456 1000001' and the final output 'Longest Palindrome is 1000001'.

```

// TODO Auto-generated method stub
int rem = 0;
rev = 0;
while(j != 0)
{
    rem = j %10;
    rev = (rev*10) + rem;
    j = j/10;
}
return rev ;
}
}

System.out.println("Enter the length of Array");
int n = scan.nextInt();
int arr[] = new int[n];
int check = 0;
int max = 0;
System.out.println("Enter the Array Elements : ");
for(int i = 0; i <= arr.length - 1; i++)
{
    arr[i] = scan.nextInt();
}
for(int i = 0; i <= arr.length - 1; i++)
{
    check = palindrome(arr[i],check);
    //System.out.println(check);
    if(arr[i] == check)
    {
        if(arr[i] > max)
        {
            max = arr[i];
        }
    }
}
System.out.println("Longest Palindrome is " + max);
}
private static int palindrome(int j, int rev) {
    // TODO Auto-generated method stub
    int rem = 0;
    rev = 0;
    while(j != 0)
    {
        rem = j %10;
        rev = (rev*10) + rem;
        j = j/10;
    }
    return rev ;
}

```

Console Output:

```

<terminated> Longest_palindrome [Java Application] C:\Program Files\U
Enter the length of Array
3
Enter the Array Elements :
121
10456
1000001
Longest Palindrome is 1000001

```