Dt : 27/9/2022

Assignment-1:(Solution)

wap to read multiple Strings using array and display the reverse of

Strings?

Ex:

DemoArray4.java

```java
package maccess;
import java.util.*;
public class DemoArray4 {
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the number of String
Objects:");
        int n = Integer.parseInt(s.nextLine());
        String a[] = new String[n];
        System.out.println("Enter "+n+" String Objects");
        for(int i=0;i<=n-1;i++)
        {
          a[i] = new String(s.nextLine());
                            //Adding Integer object to Array
        }//end of loop
        System.out.println("=====Display String in
reverse====");
        for(int i=0;i<=n-1;i++)
        {
          StringBuffer sb = new StringBuffer(a[i].toString());
          System.out.println(sb.reverse());
        }//end of loop

        s.close();
    }
}
```

o/p:

Enter the number of String Objects:

3

Enter 3 String Objects

java program

muti threading

nit hyd

=====Display String in reverse====

margorp avaj

gnidaerht itum

dyh tin

===

Assignment-2:(Solution)

wap to read multiple Strings using array and display reverse of

words in each String?

Ex : DemoArray5.java

```java
package maccess;
import java.util.*;
public class DemoArray5 {
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the number of String
Objects:");
        int n = Integer.parseInt(s.nextLine());
        String a[] = new String[n];
        System.out.println("Enter "+n+" String Objects");
        for(int i=0;i<=n-1;i++)
        {
          a[i] = new String(s.nextLine());
                            //Adding Integer object to Array
        }//end of loop
        System.out.println("=====Display String in
reverse====");
        for(int i=0;i<=n-1;i++)
        {
```

```java
            StringTokenizer ob = new
StringTokenizer(a[i].toString()," ");
            while(ob.hasMoreTokens())
            {
                StringBuffer sb = new
StringBuffer(ob.nextToken());
                System.out.print(sb.reverse()+" ");
            }//end of loop
            System.out.println();
        }//end of loop

        s.close();
    }
}
```

o/p:

Enter the number of String Objects:

3

Enter 3 String Objects

java program

hyd nit

multi threaded

=====Display String in reverse====

avaj margorp

dyh tin

itlum dedaerht

==

Assignment-3:(Solution)

wap to read multiple Strings using array and display reverse of

words in each String which starts with Vowel?

Ex : DemoArray6.java

```java
package maccess;
import java.util.*;
public class DemoArray6 {
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the number of String
Objects:");
        int n = Integer.parseInt(s.nextLine());
        String a[] = new String[n];
        System.out.println("Enter "+n+" String Objects");
        for(int i=0;i<=n-1;i++)
        {
          a[i] = new String(s.nextLine());
                            //Adding Integer object to Array
        }//end of loop
        System.out.println("====Display String in
reverse====");
        for(int i=0;i<=n-1;i++)
        {
          StringTokenizer ob = new
StringTokenizer(a[i].toString()," ");
          while(ob.hasMoreTokens())
          {
                String str = ob.nextToken();
                switch(str.charAt(0))
                {
                case 'a':
                case 'A':
                case 'e':
                case 'E':
                case 'i':
                case 'I':
                case 'o':
                case 'O':
                case 'u':
                case 'U':
                    StringBuffer sb = new StringBuffer(str);
                    System.out.print(sb.reverse()+" ");
                    break;
                default:
                System.out.print(str+" ");
                }//end switch
```

```
        }//end of while loop
        System.out.println();
    }//end of for loop

        s.close();
    }
}
```

o/p:

Enter the number of String Objects:

2

Enter 2 String Objects

java is one of Object oriented programming language

java is not complete Object oriented programming language

=====Display String in reverse====

java si eno fo tcejbO detneiro programming language

java si not complete tcejbO detneiro programming language

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2.Multi Dimensional Arrays:

   =>The Arrays which are declared with multiple dimensions are known

as Multi-Dimensional Arrays.

Ex:

 2-D Arrays

 3-D Arrays

 4-D Arrays

 ...

Note:

=>Multi-D Arrays are less used in realtime when compared to 1-D

Arrays,but using 2-D Arrays we can construct "Jagged Arrays".

faq:

define Jagged Arrays?

=>The Arrays which hold Array objects is known as "Jagged Array".

Ex : DemoArray7.java

```java
package maccess;
import java.util.*;
public class DemoArray7 {
    @SuppressWarnings("removal")
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the size of Array-1:");
        int n1 = s.nextInt();
        Integer a1[] = new Integer[n1];
        System.out.println("Enter "+n1+" elements for Array-1");

        for(int i=0;i<a1.length;i++)
        {
          a1[i] = new Integer(s.nextInt());
        }//end of loop
        System.out.println("Enter the size of Array-2:");
        int n2 = s.nextInt();
        Integer a2[] = new Integer[n2];
        System.out.println("Enter "+n2+" elements for Array-2");

        for(int i=0;i<a2.length;i++)
        {
          a2[i] = new Integer(s.nextInt());
        }//end of loop

        Integer a[][] = {a1,a2};//Jagged_Array
        System.out.println("===Display from Jagged Array====");
        for(Integer i[] : a)
        {
```

```java
        System.out.print("Array : ");
        for(Integer j : i)
        {

            System.out.print(j.toString()+" ");
        }//InnerLoop
        System.out.println();
    }//OuterLoop
    s.close();
    }
}
```

o/p:

Enter the size of Array-1:

3

Enter 3 elements for Array-1

11

12

13

Enter the size of Array-2:
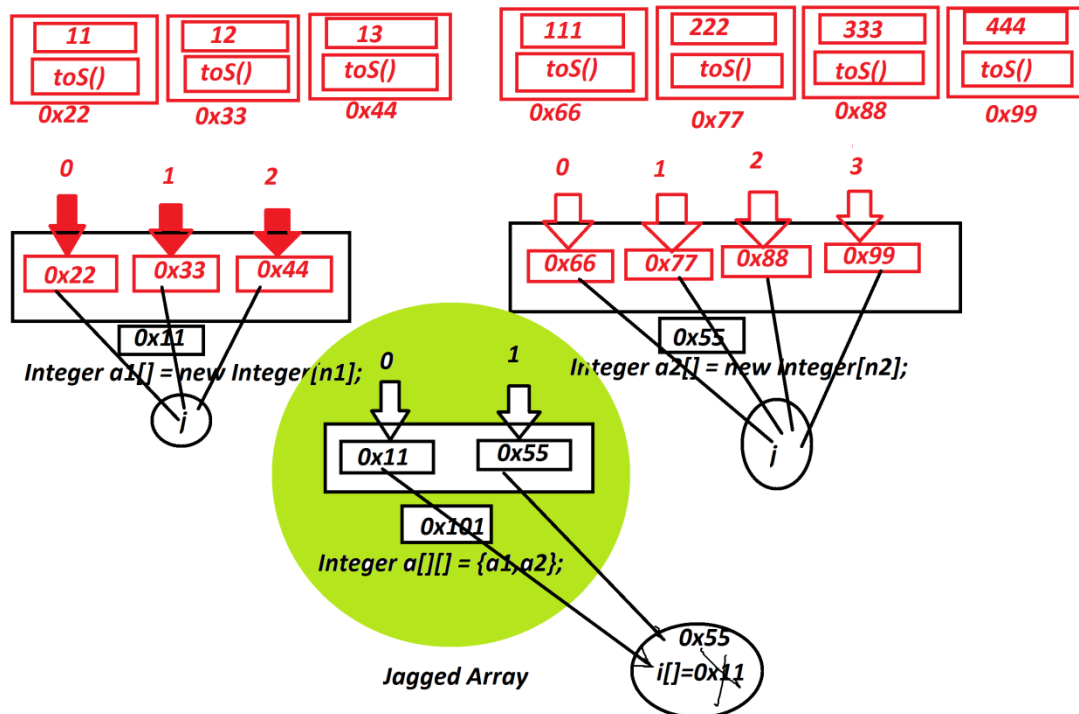
4

Enter 4 elements for Array-2

111

222

333

444

===Display from Jagged Array====

Array : 11 12 13

Array : 111 222 333 444

Jagged Array

```
Integer a1[] = new Integer[n1];
Integer a2[] = new Integer[n2];
Integer a[][] = {a1,a2};
```

==

faq:

define 'Object' array?

 =>The Array which is declared with 'java.lang.Object' class is

known as 'Object Array'.

syntax:

Object o[] = new Object[size];

Advantage:

 =>Object Array can hold Dis-Similer objects,which means holding

objects generated from different classes.

Ex : DemoArray8.java

```java
package maccess;
import test.Employee;
public class DemoArray8 {
    @SuppressWarnings("removal")
    public static void main(String[] args) {
        Object o[] = new Object[3];
        o[0] = new Integer(111);//Integer WrapperClass Object
        o[1] = new String("NIT-HYD");//String Object
        o[2] = new Employee("A123","Ram","SE",12000,32740);
                        //User defined Employee Object
        System.out.println("====Display from Object Array===");
        for(Object k : o)
        {
          System.out.println(k.toString());
        }//end of loop
    }
}
```

o/p:

====Display from Object Array===

111

NIT-HYD

A123   Ram   SE   12000 32740.0

 ==