Aditya Degree Colleges

Java Online Training Coding Test_2 Key

Date: 23-04-2020

Program - 1

You all have seen how to write loops in java. Now is the time to implement what you have learned.

Given an array A of N numbers (integers), you have to write a program which prints the sum of the elements of array A with the corresponding elements of the reverse of array A.

If array A has elements [1,2,3], then reverse of the array A will be [3,2,1] and the resultant array should be [4,4,4].

Input Format:

The first line of the input contains a number N representing the number of elements in array A.

The second line of the input contains N numbers separated by a space. (after the last elements, there is no space)

Output Format:

Print the resultant array elements separated by a space. (no space after the last element)

Example:

Input:

4

2 5 3 1

Output:

3 8 8 3

Explanation:

Here array A is [2,5,3,1] and reverse of this array is [1,3,5,2] and hence the resultant array is [3,8,8,3]

Testcases1:

Input:

3

3 2 1

Output:

4 4 4

Testcase2:

Input:

8

1 1 11 1 1 1 1 1

Output:

2 2 12 2 2 12 2 2

Testcase3:

Input:

1

1

Output:

2

Testcase4:

Input:

5

4 3 2 1 3

Output:

7 4 4 4 7

Source Code:

```
import java.util.*;

class Prog2_1

{

	public static void main(String args[])

	{	Scanner sc=new Scanner(System.in);

		int num_ele,i;

		int ele[];

		num_ele=sc.nextInt();

		ele=new int[num_ele];

		for(i=0;i<num_ele;i++)

			ele[i]=sc.nextInt();

		for(i=0;i<num_ele;i++)

			System.out.print((ele[i]+ele[num_ele-i-1])+" ");

		sc.close();

	}

}
```

Program - 2

Ravi is an enthusiastic student. He knows that in computer terminology what a palindrome means.
We can have palindromes with numbers as well as strings.

For example, madam is a string palindrome and 121 is a number palindrome.

Ravi has been assigned a task by his teacher. In this task, he has been given a list of numbers. His duty is to tell the total number of palindromic numbers present in the given numbers.

Sample Test Cases

Test case 1:

Input
5
23 3 45 67 100
output
1

Explanation:

In the given list of numbers only 3 is the palindrome. So the output is 1

Test case 2:

Input:
6
2 56 121 78 88 45
output:
3

Explanation:

in the given list, there are three palindromic numbers 2,121,88. so the output is 3

Hidden test cases:

Test case1:

input:
6
1 23 44 676 3 45
output:
4

Test case2:

input:
5
12 34 56 89 12
output:
0

Test case3:

input:
6
255 2 56 12 78 8
output:
2

Test case4:

input:
5
2 56 12 2 2
output:
3

Source Code:

```
import java.util.*;
class Prog2_2
{
    public static int palindrome(int n)
        {  int fd=0,ld=0,d;
                if(n<10)
                        return 1;
                else
                {
                        d=(int)Math.log10(n)+1;
                        while(d>0)
                        {

                          fd=n/(int)Math.pow(10,d-1);
                          ld=n%10;
                          if(fd!=ld)
                                  return 0;
                          n=n%(int)Math.pow(10,d-1);
                          n=n/10;
                          d=d-2;

                        }
                        return 1;
                }
        }
        public static void main(String args[])
        {
                Scanner sc=new Scanner(System.in);
                int num,ele[],count=0,i;
                num=sc.nextInt();
                ele=new int[num];
                for(i=0;i<num;i++)
                        ele[i]=sc.nextInt();
                for(i=0;i<num;i++)
                        count=count+palindrome(ele[i]);
                System.out.println(count);
                sc.close();
        }
}
```

MCQ Day4_Test Key

The following program represents ?

```
Class A
{       int a;
         A()
         {
         a=10;
         }
         A(int x)
         {
         a=x;
         }
}
```

A) Method Overloading for the initialization of instance variables
B) Constructor overloading for the initialization of class variables
C) Constructor overloading for the initialization of instance variables
D) Method Overloading for the initialization of class variables

ANSWER:C

Method Overloading is identified at the time of
A) Compilation
B) Run time
C) Middle time
D) Both Compile and Runtime

ANSWER:A

What will be the output of the following Java code?

```
class area
{
    int width;
    int length;
    int area;
    void area(int width, int length)
    {
        this.width = width;
        this.length = length;
    }

}
class Output
{
    public static void main(String args[])
```

```
    {
        area obj = new area();
        obj.area(15 , 16);
        System.out.println(obj.length + " " + obj.width);
    }
  }
```

A) 0 0
B) 15 16
C) 16 15
D) 15 15
ANSWER:C

Which of these cannot be declared static?
A) class
B) object
C) variable
D) method
ANSWER:B

What is the process of defining a method in a subclass having same name & type signature as a method in its superclass?
a) Method overloading
b) Method overriding
c) Method hiding
d) None of the mentioned
ANSWER:B

Find the output

```
class Emp
{    int x=40;
}
class Demo
{
  public static void main(String args[])
   {
        Emp e=null;
        System.out.print(e.x);
}
}
```

A) 40
B) 0
C) NullPointer Exception
D) NumberFormat Exception
ANSWER:C

wrapping of code and data into single unit is
A) Encapsulation
B) Inheritance
C) polymorphisim
D) multi threads
ANSWER:A

Predict the output

```
class A
{
int x;
static int y;
public static void main(String args[])
{
A o=new A();
A o1=new A();
o.x=10;
o1.x=20;
o.y=12;
o1.y=13;
System.out.println(o.y +" "+o1.y);
}
}
```

A) 12 12
B) 12 13
C) 13 13
D) 10 20
ANSWER:C

Object Oreinted programming is
A) TopDown Approach
B) Unstructured Approach
C) Bottom Approach
D) All of the Above
ANSWER:C

class variables are also called as
A) instance variable
B) static variables
C) local variables
D) None of the above
ANSWER:B

Predict the output

```
class Output
   {
      public static void main(String args[])
      {
         int a1[] = new int[10];
         int a2[] = {1, 2, 3, 4, 5};
         System.out.println(a1.length + " " + a2.length);
      }
   }
```

A) 0 5
B) 5 10
C) 0 10
D) 10 5
ANSWER:D

public String substring(int Index) is
A) used to return the substring from the specified Index to end of the string.
B) used to return the substring from the 0 index to specified Index.
C) substring with single parameter is not existed
D) None of the Above
ANSWER: A

```
class StringBuilderDemo{
public static void main(String args[]){
StringBuilder sb=new StringBuilder("JAVA ");
sb.append("Language");
System.out.println(sb);
}
}
```

A) Language
B) compile time error
C) JAVA
D) JAVA Language
ANSWER: D

StringBuilder capacity() method
A) the capacity() method returns the current capacity of the Builder.
B) the capacity() method returns the initial length of the Builder.
C) the capacity() method return the double lenght of the Builder
D) the capacity() method returns the minimum capacity of the Builder.
ANSWER: A

StringBuffer is thread Safe
A) True
B) False
C) None of the above
D) Can't say
ANSWER: A

```
class TestDemo1
{
        public static void main(String args[])
   {
                StringBuffer sb=new StringBuffer("Andhra Pradesh");
                sb.insert(6,boolean);
                System.out.println(sb);
        }
}
```

A) Andhraboolean Pradesh
B) Andhra Pradesh
C) Compilation Error
D) None of the above
ANSWER:C

```
class TestDemo1
{
   public static void main(String args[])
    {
        StringBuffer sb=new StringBuffer("Andhra Pradesh");
        sb.delete(6,14);
        System.out.println(sb);
    }
}
```

A) Pradesh
B) Andhra
C) ANDHR
D) Andhra P
ANSWER:B

```
class TestDemo1
{
        public static void main(String args[])
   {
                StringBuffer sb=new StringBuffer("Andhra Pradesh State Government");
                sb.setLength(10);
                System.out.println(sb);
        }
}
```

A) 10
B) Andhra Pra
C) Andhra P
D) None of the above
ANSWER:B

```
class TestDemo1
{
        public static void main(String args[])
   {
                StringBuffer sb=new StringBuffer(500);
                sb.append("Andhra Pradesh");
                sb.trimToSize();
                System.out.println(sb.capacity());
        }
}
```

A) 15
B) 13
C) 14
D) 12
ANSWER:C

```
class TestDemo1
{
        public static void main(String args[])
   {
                StringBuffer sb=new StringBuffer();
                sb.append("Andhra Pradesh");
                System.out.print(sb.capacity()+" ");
                sb.ensureCapacity(400);
                System.out.print(sb.capacity());
        }
}
```

A) 16 400
B) 400 16
C) 400 400
D) 16 16
ANSWER: A