
Write a program to get the following

input str1="Water,str2="Bottle"
o/p-WatBottleer

```
public class StringManipulation1 {


	public static void main(String[] args) {
		 String str1="Water";
		String str2="Bottle";


		 //str2.replaceFirst("", str1.substring(0, 3));
		 //o/p WatBottle

		//str1.substring(str1.length()-2, str1.length());
		 //o/p er
		System.out.println(str2.replaceFirst("",
str1.substring(0, 3))+ str1.substring(str1.length()-2,
str1.length()));


	}

}
```

Write a Program to print average of the integer array elements and also to print the mean base on odd or even number of elements in the array

```
public class ArrayAverage {

	public static void main(String[] args) {


		int[] numbers = new int[]{10,20,15,25,16,60,100,5,7};

			//to print the average of array elements
			int sum = 0;

			for(int i=0; i < numbers.length ; i++)
				sum = sum + numbers[i];
```

```
                double average = sum / numbers.length;

                System.out.println("Average value of array
elements is : " + average);

        //to give you the mean based on odd or even elements
                // in the array
                if (numbers.length % 2==0)
                {
                     int num1pos=numbers.length/2;
                     int num2pos=num1pos +1;
                     double mean=(numbers[num1pos-
1]+numbers[num2pos-1])/2;
                     System.out.println(mean);

                }
                else
                {
                    int num1pos=numbers.length/2;
                    System.out.println(numbers[num1pos]);
                }

        }
}
```

Write a program to divide a number without using / operator

```
public class DivideWithOutOperator {


     public static void main(String[] args) {
          int number = 26;
          int divisor = 5;
          int result = 0;

          while((number-divisor)>=0){
            result++;
            number = number - divisor;
          }

          System.out.println(result);
     }
```

```
}
```

Write a program to multiply 2 numbers without using number without using * multiplication operator

```
public class MultiplyWithoutOperator {


	public static void main(String[] args) {
		int number1 = 10;
		int number2 = 5;
		int result = 0;

		for(int i=1;i<=number2;i++)
		{
			result=result + number1;
		}

		System.out.println(result);

	}

}
```

Write a program to sort numbers and digits in a given String

```
public class SortingNumberAndDigits {


	public static void main(String[] args) {
		String str="abcd123efgh456";
		char[] charArray = str.toCharArray();
		StringBuffer str1=new StringBuffer();
		StringBuffer str2=new StringBuffer();
		for(char ch: charArray)
		{
			if (Character.isDigit(ch))
			{
			  str1=str1.append(ch);
			}
			else
			{
				str2=str2.append(ch);
			}
		}
		System.out.println(str1);
```

```
            System.out.println(str2);


      }
}
```

Write a program to print A-Z and a-z

```
public class PrintA2Z {

      public static void main(String[] args) {
            for(char ch='a';ch<='z';ch++){
              System.out.print(ch+" ");
          }
          System.out.println();
          for(char ch='A';ch<='Z';ch++){
              System.out.print(ch+" ");
          }

      }

}
```

Write a program to reverse a String and also Sort the string characters alphabetically.

```
public class ReverseAndSort {


      public static void main(String[] args) {
            String str="Hello Chennai";
            StringBuffer str1 = new StringBuffer(str);
            System.out.println(str1.reverse());
            //to put it in a string
            str=str1.reverse().toString();
            System.out.println(str);

            //code to sort
            char[] charArray = str.toCharArray();
            Arrays.sort(charArray);
            str=new String(charArray);
            System.out.println(str);

      }
```

```
}
```

Write a program to print a the following Triangle

```
     1
    1 1
   1 1 1
  1 1 1 1
1 1 1 1 1
```

```
public class TriangleOne {

     public static void main(String[] args) throws IOException {
     System.out.println("Enter the number of rows");
             Scanner in = new Scanner(System.in);

             int numRow = in.nextInt();
             for (int i = 1; i <= numRow; i++) {
                 // Prints the blank spaces
                 for (int j = 1; j <= numRow - i; j++) {
                     System.out.print(" ");
                 }
                 // Prints the value of the number
                 for (int k = 1; k <= i; k++) {
                     System.out.print("1 ");
                 }
                 System.out.println();
             }
    } }
```

Write a program to print a the following Triangle

```
    1
   2 2
  3 3 3
 4 4 4 4
5 5 5 5 5
```

```
public class RowNumberIncrementTriangle {

      public static void main(String[] args) throws IOException
{
          System.out.println("Enter the number of rows");
                  Scanner in = new Scanner(System.in);

                  int numRow = in.nextInt();
                  for (int i = 1; i <= numRow; i++) {
                      // Prints the blank spaces
                      for (int j = 1; j <= numRow - i; j++) {
                          System.out.print(" ");
                      }
                      // Prints the value of the number
                      for (int k = 1; k <= i; k++) {
                          System.out.print(i +" ");
                      }
                      System.out.println();
                  }
          }
 }
```

Sample JAVA programs

Write a program to print a the following Triangle

```
    1
   32
  654
10987
```

```
public class FlippedTriangle
{
     public static void main(String[] args)
     {
        int rows=4;
        int cntr=1;
        int start;
        int val;
       for(int i=1;i<=rows;i++)
       {

        for(int k=rows-i;k>=1;k--)
        {
             System.out.print(" ");
        }
        start=cntr + i-1;
             val=start;
        for(int j=1;j<=i;j++)
        {

          System.out.print(start);
          start--;
          cntr++;
        }
        System.out.println();
       }

     }

}
```

Sample JAVA programs

Write a program to print the next characters in a given String
Ex:
String s1=”Selenium”
o/p should be- `Tfmfojvn`

```
public class SetNextCharForString {

	public static void main(String[] args) {
		String str="Selenium";
		StringBuffer str1=new StringBuffer();
		char arr[]=str.toCharArray();

		for(int i=0;i<=arr.length-1;i++)
		{
			char ch=arr[i];
			str1=str1.append(++ch);
		}
		System.out.println(str1);

	}

}
```

Write a program to print the perfect numbers b/w 1-500
Ex:
The number 6 is said to be a perfect number because it is equal to the sum of all its exact divisors (other than itself).
6 = 1 + 2 + 3

```
public class PerfectNumber{

    public static void main(String[]args){

     int sum=0, x=0;

     for(int num=1;num<500;num++)
```

```
      {
         for(int i=1;i<num;i++)
         {
           x=num%i;
           if(x==0)
             sum=sum+i;
         }
         if(sum==num)
         {
          System.out.println("Perfect Number is: "+num);
          System.out.println("Factors are: ");
          for(int i=1;i<num;i++)
          {
           x=num%i;
           if(x==0)
           System.out.println(i);
          }
         }
          sum=0;
     }
  }
}
```

Write a program to print the adams number

If the reverse square root of the reverse of square of a number is the number itself then it is Adam Number.
12 and 21
Take 12
square of 12 = 144
reverse of square of 12 = 441
square root of the reverse of square of 12 = 21
The reverse square root of the reverse of square of 12 = 12, then number itself.
Such number is called Adam Number.

```
class AdamsNumber
{


       public static void main(String[] args)
       {

          AdamsNumber an = new AdamsNumber();
          int i, n, rn;
```

```
            int sn, rsn, rrsn;
            System.out.println("List of Adam Numbers under 1000");
            for (i = 10; i < 1000; i++)
            {
               n = i;
               rn = an.ReverseNumber(i);
               if (n == rn)
                  continue;
               sn = n * n;
               rsn = rn * rn;
               rrsn = an.ReverseNumber(rsn);
               if (rrsn == sn)
               {
                  System.out.println(n);
               }
            }
         }

         int CountNumberOfDigits(int n)
         {
            int numdgits = 0;
            do
            {
               n = n / 10;
               numdgits++;
            }
            while (n > 0);
            return numdgits;
         }

         int ReverseNumber(int n)
         {
            int i = 0, result = 0;
            int numdigits = CountNumberOfDigits(n);
            for (i = 0; i < numdigits; i++)
            {
               result *= 10;
               result += n % 10;
               n = n / 10;
            }
            return result;
         }
}
```

Sample JAVA programs
