**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();

}

}

}

**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();

}

}

}

**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;

}

}