1. Write a java program to print alphabets?// from a to z  
   class PrintAlfabetDemo{  
   public static void main(String[] args){  
   for(char ch=’a’;ch<=’z’;ch++){  
   System.out.println(ch);  
   }  
   }  
   }
2. Write a java program to find largest of three numbers?  
   import java.util.\*;  
   class LargestNumberDemo{  
   public static void main(String[] args){  
   System.out.println(“Enter three different integer…”);  
   Scanner sc = new Scanner(System.in);  
   int x = sc.nextInt();  
   int y = sc.nextInt();  
   int z = sc.nextInt();  
   if(x>y && x>z){  
   System.out.println(“x is the largest: “+ x);  
   }  
   else if(y>x && y>z){  
   System.out.println(“y is the largest: “+ y);  
   }  
   else if(z>x && z>y){  
   System.out.println(“z is the largest: “+ z);  
   }  
   }  
   }
3. Write a java program to find even and odd number?  
   import java.util.\*;  
   class FindEvenOddDemo{  
   public static void main(String[] args){  
   System.out.println(“enter number…”);  
   Scanner sc = new Scanner(System.in);  
   int num = sc.nextInt();  
   if(num%2==0){  
   System.out.println(“The number is even: “+num);  
   }  
   else{  
   System.out.println(“The number is odd: “+num);  
   }  
   }  
   }
4. Write a java program to check whether a given number is  
   even or odd without using modulus operator?  
   import java.util.\*;  
   class EvenOddDemo2{  
   public static void main(String[] args ){  
   System.out.println(“Enter the no…”);  
   Scanner sc = new Scanner(System.in);  
   int number = sc.nextInt();  
   int result = (number/2)\*2;  
   if(result==number){  
   System.out.println(“the given no is even”);}  
   else{  
   System.out.println(“the given no is odd”);  
   }  
   }  
   }
5. Write a java program to find sum of 10 numbers in java?  
   class SumOfTen{  
   public static void main(String[] args){  
   int sum=0;  
   for(int i=1;i<=10;i++){  
   sum= sum+i;  
   }  
   System.out.println(“Sum of 10 is: “+ sum);  
   }  
   }
6. Write a java program to find reverse of a number in java?  
   /\*logic:  
   1. convert number into string using String.valueOf(number)  
   2. use the for loop to reverse the string  
   3. convert the reversed string into Integer  
   \*/  
   class ReverseNumberDemo{  
   public static void main(String[] args){  
   Integer number = 456;  
   String stringNumber = String.valueOf(number);  
   String reverse=””;  
   for(int i = stringNumber.length()-1;i>=0;i–){  
   reverse = reverse+stringNumber.charAt(i);  
   }  
   System.out.println(“the reverse of no is: “+ Integer.valueOf(reverse));  
   }  
   }
7. Write a java program to find factorial of a number in java?  
   class FactorialDemo{  
   public static void main(String[] args){  
   int number = 5;  
   int fact=1;  
   for(int i=1;i<=number;i++){  
   fact=fact\*i;  
   }  
   System.out.println(“The factorial is: “+ fact);  
   }  
   }
8. Write a java program to check whether array of string contains duplicates  
   /\*logic:  
   1. convert array of sring into list  
   2. convert list into set  
   3. check if duplicateList.size()!=dulicateSet.size()\*/  
   import java.util.\*;  
   class ArrayDuplicateDemo{  
   public static void main(String[] args){  
   String [] duplicates = new String[]{“jsp”,”oracle”,”c”,”java”};  
   List<String> duplicateList = Arrays.asList(duplicates);  
   Set<String> dulicateSet = new HashSet<>(duplicateList);  
   if(duplicateList.size()!=dulicateSet.size()){  
   System.out.println(“The array contains duplicates”);  
   }  
   else{  
   System.out.println(“The array doesn’t contain duplicate”);  
   }  
   }  
   }

**Question 1 : Print Fibonacci series up to 10 elements.**  
 **Solution :**  
  
  
package core.neel;  
  
public class test {  
  
   
 public static void main(String[] args) {  
 int arr[]=new int[13];  
 arr[0]=0;  
 arr[1]=1;  
   
 for(int i=2;i<=12;i++){  
 arr[i]=arr[i-1]+arr[i-2];  
 }  
 for(int i=0;i<=arr.length-1;i++){  
 System.out.print(arr[i]+" ");  
 }  
  
 }  
  
}  
  
**Output :** 0 1 1 2 3 5 8 13 21 34 55 89 144

**Question 2 : Print  Star pattern as shown below .**

**Solution :**

package core.neel;

public class test {

public static void main(String[] args) {

int star=0;

for(int i=0;i<=4;i++){

for(int s=0;s<=4-i;s++){

System.out.print(" ");

}

for(int k=0;k<=star;k++){

System.out.print("\*");

}

star=star+2;

System.out.println();

}

star=star-5;

for(int j=0;j<=3;j++){

for(int h=0;h<=1+j;h++){

System.out.print(" ");

}

for(int l=0;l<=star;l++){

System.out.print("\*");

}

star=star-2;

System.out.println("\*");

}

}

}

**Question 3 : Print pattern shown below .**

[](http://3.bp.blogspot.com/-kBZr2lP2SiU/UC4rNdoHLeI/AAAAAAAAABo/k2K4VrGe-U4/s1600/Untitled.png)

**Solution :**

package core.neel;

public class test {

public static void main(String[] args) {

for(int i=0;i<=4;i++){

int t=(int) Math.pow(11, i);

char arr[]=String.valueOf(t).toCharArray();

int k=4;

while(k>=i){

System.out.print(" ");

k--;

}

int j=0;

while(j<=arr.length-1){

System.out.print(arr[j]+" ");

j++;

}

System.out.println();

}

}

}

**Question 4 : Write a program to calculate ncr(combination) and npr(permutation) .**

**Solution :**

package core.neel;

import java.util.Scanner;

public class test {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter value of n :");

int n = sc.nextInt();

System.out.println("Enter value of r :");

int r = sc.nextInt();

int facN = 1;

for(int i=1;i<=n;i++){

facN = facN\*i;

}

System.out.println("facN : "+facN);

int facR = 1;

for(int i=1;i<=r;i++){

facR = facR\*i;

}

System.out.println("facR : "+facR);

int facNR = 1;

for(int i=1;i<=n-r;i++){

facNR = facNR\*i;

}

System.out.println("facNR : "+facNR);

double ncr = facN/(facR\*facNR);

double npr = facN/facR;

System.out.println("Combination : "+ncr);

System.out.println("Permutation : "+npr);

}

}

**Question 5 : Write a program to demonstrate queue implementation in array .**

**Solution :**

package neel.core;

public class QueueTest {

int top;

int rear;

int arr[];

int max;

QueueTest(int size){

max=size;

top=-1;

rear=0;

arr = new int[max];

}

void push(int element){

if(top>=max-1){

System.out.println("Overflow !");

}

else

{

top=top+1;

arr[top]=element;

System.out.println("Element inserted !");

}

}

void pop(){

if(top<rear){

System.out.println("Underflow");

}

else{

rear=rear+1;

System.out.println("Element deleted !");

}

}

void display(){

if(top<rear){

System.out.println("No elemnt to display");

}else{

System.out.print("Elements in queue : ");

for(int i = rear;i<=top;i++){

System.out.print(arr[i]+" ");

}

}

}

public static void main(String[] args) {

QueueTest qt = new QueueTest(1);

qt.display();

qt.pop();

qt.push(1);

qt.display();

qt.push(2);

qt.pop();

qt.push(2);

qt.display();

}

}

**Question 6 : Write a program to demonstrate Stack implementation in array .**

**Solution :**

package neel.core;

public class StackTest {

int top;

int arr[];

int max;

StackTest(int size){

max=size;

top=-1;

arr = new int[max];

}

void push(int element){

if(top==max-1){

System.out.println("overflow !");

}

else

{

top=top+1;

arr[top]=element;

System.out.println("Element inserted !");

}

}

void pop(){

if(top<0){

System.out.println("Underflow !");

}

else{

top=top-1;

System.out.println("Elemnet deleted !");

}

}

void peak(){

if(top<0){

System.out.println("Underflow !");

}

else{

System.out.println("Peak : "+arr[top]);

}

}

void display(){

if(top==-1){

System.out.println("No element to display !");

}

else

{

System.out.print("Elements in stack : ");

for(int i =0;i<=top;i++){

System.out.print(arr[i]+" ");

}

}

}

public static void main(String[] args) {

StackTest st = new StackTest(2);

System.out.println("top : "+st.top);

st.display();

System.out.println("top : "+st.top);

st.pop();

System.out.println("top : "+st.top);

st.push(1);

System.out.println("top : "+st.top);

st.push(3);

System.out.println("top : "+st.top);

st.pop();

System.out.println("top : "+st.top);

st.peak();

st.display();

}

}

**Question 7 : Write a program to print following pattern .**

**Solution :**

package core.neel;

import java.util.Scanner;

public class Design1 {

public static void main(String[] args) {

for(int i=0;i<=3;i++){

for(int k=0;k<=i;k++){

System.out.print("\* ");

}

System.out.println();

}

for(int k=2;k>=0;k--){

for(int m=0;m<=k;m++){

System.out.print("\* ");

}

System.out.println();

}

}

}

**Question 8 : Write a program  that w'll take an string name as input and w'll print that name in correct name format as:**

**Input : abdul kalAm aaJad**

**Output : A. K . Aajad**

**name string may contain any number of words in it.**

**Solution :**

package core.neel;

import java.util.ArrayList;

import java.util.Scanner;

public class StringTest {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter full name :");

char inputArr[]=sc.nextLine().trim().toCharArray();

int spaceCount=0;

ArrayList al = new ArrayList();

for(int i=0;i<=inputArr.length-1;i++){

if(inputArr[i]==' ' ){

spaceCount++;

}

}

if(spaceCount==0){

System.out.print(Character.toUpperCase(inputArr[0]));

for(int f=1;f<=inputArr.length-1;f++){

System.out.print(Character.toLowerCase(inputArr[f]));

}

}

int count=0;

for(int i=0;i<=inputArr.length-1;i++){

if(spaceCount>0 && i==0){

System.out.print(Character.toUpperCase(inputArr[i])+". ");

}

if(inputArr[i]==' '){

count++;

if(count!=spaceCount){

System.out.print(Character.toUpperCase(inputArr[i+1])+". ");

}

else{

System.out.print(Character.toUpperCase(inputArr[i+1]));

for(int h=i+2;h<=inputArr.length-1;h++){

System.out.print(Character.toLowerCase(inputArr[h]));

}

}

}

}

}

}