**ASSIGNMENT**

NAME :- MD DILDAR MANDAL

ROLL NO. :- 202102021043

BRANCH :- CSE

SEMESTER :- 3rd

MODULE:- BTECH

**ASSIGNMENT\_1**

1.

class patrn\_1{

public static void main(String[] args){

for(int i = 0;i < 8;i++){

for(int j = i + 1;j > 0 ;j-- ){

System.out.print("# ");

}

System.out.println();

}

}

}

2.

import java.lang.\*;

class patrn\_2{

public static void main(String[] args){

for(int i = 8;i > 0;i--){

for(int j = i;j > 0 ;j-- ){

System.out.print("# ");

}

System.out.println();

}

}

}

3.

import java.lang.\*;

class patrn\_3{

public static void main(String[] args){

for(int i = 8;i > 0;i--){

for(int k = 8 - i;k > 0;k--){

System.out.print(" ");

}

for(int j = i;j > 0 ;j-- ){

System.out.print("# ");

}

System.out.println();

}

}

}

4.

import java.lang.\*;

class patrn\_4{

public static void main(String[] args){

for(int i = 8;i > 0;i--){

for(int k = i - 1;k > 0;k--)

System.out.print(" ");

for(int j = 8-i+1;j > 0 ;j-- ){

System.out.print("# ");

}

System.out.println();

}

}

}

5.

import java.lang.\*;

class patrn\_5{

public static void main(String[] args){

for(int i = 0;i < 7;i++){

if(i == 0 || i == 6){

for(int j = 0; j < 7; j++){

System.out.print("# ");

}

}

else{

System.out.print("# #");

}

System.out.println();

}

}

}

6.

import java.lang.\*;

class patrn\_6 {

public static void main(String args[]){

for(int i = 0;i < 7;i++){

if(i == 0 || i == 6){

for(int j = 0; j < 7; j++){

System.out.print("# ");

}

}

else{

for(int k = 0; k < 7;k++){

if(k == i) System.out.println("# ");

else System.out.print(" ");

}

}

System.out.println();

}

}

}

7.

import java.lang.\*;

class patrn\_7 {

public static void main(String args[]){

for(int i = 0;i < 7;i++){

if(i == 0 || i == 6){

for(int j = 0; j < 7; j++){

System.out.print("# ");

}

}

else{

for(int k = 6; k >= 0 ;k--){

if(k == i) System.out.println("# ");

else System.out.print(" ");

}

}

System.out.println();

}

}

}

8.

import java.lang.\*;

class patrn\_8 {

public static void main(String args[]){

for(int i = 0;i < 7;i++){

if(i == 0 || i == 6){

for(int j = 0; j < 7; j++){

System.out.print("# ");

}

}

else{

for(int k = 0; k < 7 ;k ++){

if((k == i) || (k == 6-i)) System.out.print("# ");

else System.out.print(" ");

}

}

System.out.println();

}

}

}

9.

import java.lang.\*;

class patrn\_9 {

public static void main(String args[]){

for(int i = 0;i < 7;i++){

if(i == 0 || i == 6){

for(int j = 0; j < 7; j++){

System.out.print("# ");

}

}

else{

for(int k = 0; k < 7 ;k ++){

if((k == i) || (k == 6-i) || k == 0 || k == 6) System.out.print("# ");

else System.out.print(" ");

}

}

System.out.println();

}

}

}

10.

import java.lang.\*;

class patrn\_10{

public static void main(String[] args){

for(int i = 12;i > 0;i--){

if(i % 2 != 0)System.out.println();

else{

for(int k = 12 - i;k > 0;k --){

System.out.print(" ");

}

for(int j = i;j > 1 ;j-- ){

System.out.print("# ");

}

System.out.println();

}

}

}

}

11.

import java.lang.\*;

class patrn\_11{

public static void main(String[] args){

for(int i = 1;i <= 12;i ++){

if(i % 2 == 0){

System.out.println();

}

else{

for(int k = (12-i-1)/2;k >0;k --){

System.out.print(" ");

}

for(int j = i;j > 0 ;j-- ){

System.out.print("# ");

}

System.out.println();

}

}

}

}

12.

import java.lang.\*;

class patrn\_12{

public static void main(String[] args){

for(int i = 1;i <= 10;i ++){

if(i % 2 == 0){

System.out.println();

}

else{

for(int k = (12-i-1)/2;k >0;k --){

System.out.print(" ");

}

for(int j = i;j > 0 ;j-- ){

System.out.print("# ");

}

System.out.println();

}

}

for(int i = 12;i > 0;i--){

if(i % 2 != 0)System.out.println();

else{

for(int k = 12 - i;k > 0;k --){

System.out.print(" ");

}

for(int j = i;j > 1 ;j-- ){

System.out.print("# ");

}

System.out.println();

}

}

}

}

13.

import java.lang.\*;

class patrn\_13{

public static void main(String[] args){

for(int i = 8;i >0;i --){

for(int j = 8 - i + 1,k = 1;j > 0;j--,k++){

System.out.print(k + " ");

}

System.out.println();

}

}

}

14.

import java.lang.\*;

class patrn\_14{

public static void main(String[] args){

for(int i = 8;i >0;i --){

for(int l = 8 - i;l > 0;l--){

System.out.print(" ");

}

for(int j = i,k = 1;j > 0;j--,k++){

System.out.print(k + " ");

}

System.out.println();

}

}

}

15.

import java.lang.\*;

class patrn\_15{

public static void main(String[] args){

for(int i = 8;i >0;i --){

for(int l = i - 1;l > 0;l--){

System.out.print(" ");

}

for(int j = 8 - i + 1;j > 0;j--){

System.out.print(j + " ");

}

System.out.println();

}

}

}

16.

import java.lang.\*;

class patrn\_16{

public static void main(String[] args){

for(int i = 8;i > 0;i --){

for(int j = i ;j > 0;j--){

System.out.print(j + " ");

}

System.out.println();

}

}

}

17.

class patrn\_17{

public static void main(String[] args){

int n=8,temp=2;

for(int i=1 = 0;i <= n;i++){

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

System.out.print(" ");

}

}

for(int j=1;j<=(2\*(i-1))++1;j++){

if(j<=i){

System.out.print(j);

}

else{

System.out.print(j-temp);

temp+=2;

}

}

temp = 2;

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

}

}

18.

class patrn\_18{

public static void main(String args[]){

int n = 8,temp = 2;

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

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

System.out.print(" ");

}

for(inti;j <=(2\*(n-i))+1;i++){

if(j<=(n-(i-1))){

System.out.print(j);

}

else System.out.print(i-temp);

temp += 2;

}

temp =2;

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

}

}

}

19.

class patrn\_19{

public static void main(String[] args) {

int n = 8;

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

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

System.out.print(j);

}

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

System.out.print(" ");

}

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

if(j<n){

if(i==n)System.out.print(i-j);

}

else System.out.print((i+1)-j);

}

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

}

}

}

20.

class patrn\_20{

public static void main(String[] args){

int n = 8;

for(int i = 8;i > 0;i--){

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

System.out.print(j);

}

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

System.out.print(" ");

}

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

System.out.print(" ");

}

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

if(j < n){

if(i <=n)System.out.print(i-j);

else System.out.print((i+1)-j);

}

}

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

}

}

}

21.

class patrn\_21{

public static void main(String args[]){

int n =8,temp =1;

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

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

System.out.print(" ");

}

for(int j=1;j<=(2\*(i-1)+1);j++){

if(j<=i){

if(temp>9){

temp=0;

}

System.out.print(temp);

temp+=1;

}

else{

if(j==(i+1)){

temp-=2;

}

else temp-=1;

if(temp < 0){

temp =9;

}

System.out.print(temp);

}

}

if(i>=2) {

temp+=1;

}

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

}

}

}

**ASSIGNMENT\_2**

1.

import java.util.\*;

class passengers{

String name;

int age;

String seatchoice;

public void passengers(){

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

this.name=scn.nextLine();

System.out.println("Enter the age: ");

this.age=scn.nextInt();

System.out.println("Enter the Seat choice: ");

System.out.println("low, mid, up, upside, lowside");

this.seatchoice=nextLine();

}

}

class reservation{

String pname;

String seatalloted;

public static reservation(String namep,String pseatallocated){

this.pname=namep;

this.seatalloted=pseatalloted;}

void display(){

System.out.println("Passenger name: " + name );

System.out.println("Seat alloted: " + seatalloted);

}

}

class q1{

static void allocate(){

switch((arr[i].seatchoice)){

case "low":

if (low>0){

System.out.println("Seat booked");

low--;

arrr[i].reservation(name,"low");}

else{

System.out.println("Seat filled up");

System.out.println("Alloting to other empty seats");

otherseat((arr[i].seatchoice));}

case "mid":

if (mid>0){

System.out.println("Seat booked");

mid--;

arrr[i].reservation(name,"mid");}

else{

System.out.println("Seat filled up");

System.out.println("Alloting to other empty seats");

otherseat((arr[i].seatchoice));}

case "up":

if (up>0){

System.out.println("Seat booked");

up--;

arrr[i].reservation(name,"up");}

else{

System.out.println("Seat filled up");

System.out.println("Alloting to other empty seats");

otherseat((arr[i].seatchoice));}

case "upside":

if (upside>0){

System.out.println("Seat booked");

upside--;

arrr[i].reservation(name,"upside");}

else{

System.out.println("Seat filled up");

System.out.println("Alloting to other empty seats");

otherseat((arr[i].seatchoice));}

case "lowside":

if (lowside>0){

System.out.println("Seat booked");

lowside--;

arrr[i].reservation(name,"lowside");}

else{

System.out.println("Seat filled up");

System.out.println("Alloting to other empty seats");

otherseat((arr[i].seatchoice));}

}

}

public static void otherseat((arr[i].seatchoice)){

if (low>0)

arrr[i].reservation(name,"low");

else if (mid>0)

arrr[i].reservation(name,"mid");

else if (up>0)

arrr[i].reservation(name,"up");

else if (upside>0)

arrr[i].reservation(name,"upside");

else if (lowside>0)

arrr[i].reservation(name,"lowside");

}

public static void main(String args[]){

Scanner scn=new Scanner(System.in);

//Program is just limited for 24 seats as per the constraints set

System.out.println("Total seats left is 24");

System.out.println("The Seats are reserved for female");

int upside=3,lowside=3,up=6,mid=6,low=6,n=24;

//Array initialisation for Passenger class

passengers arr[];

arr = new details[24];

//Array initialisation for reservation class

reservation arrr[];

arrr=new reservation[24];

for (int i=0;i<24;++i) arr[i].passsengers();

//Alloting seats to senior citizen

for (int i=0;i<24;i++){

if (arr[i].age>=65) allocate();

}

//To allocate the seats to passenger below 65 years

for (int i=0;i<24;i++){

if (arr[i].age<65) allocate();

}

//Printing the allocated seats

for (int i=0;i<24;i++){

arrr[i].display();

System.out.println();

}

}

}

2.

import java.util.\*;

class course{

int credit;

String medium;

int minNumA=3;

int minNumB=3;

course(int n,String m){

this.credit = n;

this.medium = m;

}

void display(){

if(cntA > minNumA || cntB > minNumB){

System.out.println("floated");

System.exit(0);

}

else{

System.out.println("not floated");

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

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

}

}

}

class courseA extends course{

void number(){

cntA++;

}

void displayA(){

System.out.println("total no of student registered: "+cntA);

System.out.println(":course A: ");

}

}

class courseB extends course{

void number(){

cntB++;

}

void displayB(){

System.out.println("total no of student registered: "+cntB);

System.out.println(":course B: ");

}

}

class q2{

public static void main(String args[]){

Scanner sc = new Scanner(System.in);

static int cntA=0;

static int cntB=0;

courseA objA= new courseA();

courseB objB= new courseB();

course obj = new course();

String ans = "y";

while(ans=='y'){

System.out.println("what course do you want course ..A/B");

char respo;

if(respo == 'A'){

objA.number();

System.out.println("enter credit");

int cre=sc.nextInt();

System.out.println("enter medium");

String med=sc.nextLine();

obj(cre,med);

objA.displayA();

obj.display();

}

else{

objB.number();

System.out.println("enter credit");

int cre=sc.nextInt();

System.out.println("enter medium");

String med=sc.nextLine();

obj(cre,med);

objB.displayB();

obj.display();

}

System.out.println("want to enter more y/n");

ans =sc.next().charAt(0);

}

}

}

**ASSIGNMENT\_3**

1.

import java.util.Scanner;

class q1{

public static void main(String[] args){

System.out.print("enter number between 1 to 50 ");

Scanner obj = new Scanner(System.in);

int n = obj.nextInt();

int ans = 0;

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

ans += i;

System.out.print(i+" ");

if(ans == n)break;

}

System.out.print(" "+ans);

}

}

2.

class q2{

public static void main(String args[]){

System.out.println("Perfect number: ");

for (int i=1; i<=1000; i++){

int sum = 0,m=i/2;

for (int j=1; j<=m; j++){

if (i%j == 0)sum+=j;

}

if (sum ==i)System.out.print("\t" + i);

}

}

}

3.

class delivery{

int deliveryNum;

int distanceCode;

int weight;

float fee;

static int deliveryCnt=1;

delivery(int year,int distanceCode,int weight){

this.distanceCode = distanceCode;

deliveryNum= year \*10000 + deliveryCnt;

this.weight = weight;

if(distanceCode == 1){

if(weight < 5) fee = 12.00f;

else if(weight > 5 && weight < 20) fee = 16.50f;

else if(weight >= 20)fee = 22.00f;

}

else{

if(weight < 5)fee = 35.00f;

if(weight >= 5)fee = 47.95f;

}

deliveryCnt++;

}

void deliveryDetails(){

System.out.println("Delivery Number : "+deliveryNum);

System.out.println("Code : "+ distanceCode);

System.out.println("Weight : "+weight+ " pounds");

System.out.println("Fee($) : "+fee);

System.out.println();

}

}

class q3{

public static void main(String[] args){

delivery obj1 = new delivery(2022,2,6);

obj1.deliveryDetails();

delivery obj2 = new delivery(2023,1,20);

obj2.deliveryDetails();

delivery obj3 = new delivery(2023,2,20);

obj3.deliveryDetails();

delivery obj4 = new delivery(2020,1,18);

obj4.deliveryDetails();

}

}

4.

import java.util.\*;

class q4{

public static void main(String args[]){

int arr[];

System.out.println("enter size of array and the element");

Scanner sc = new Scanner(System.in);

int size =sc.nextInt();

arr = new int[size];

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

arr[i]=sc.nextInt();

}

int max=arr[0],min=arr[0];

System.out.println("Array before exchange: arr= " + Arrays.toString(arr));

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

if(arr[i]>max) max=arr[i];

else if(arr[i]<min) min=arr[i];

}

System.out.println("Min : " + min + " Max : "+ max);

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

if (arr[i]==min) arr[i]=max;

else if (arr[i]==max)arr[i]=min;

}

System.out.println("Array after exchange: arr= " + Arrays.toString(arr));

}

}

5.

import java.util.\*;

class q5{

public static void main(String args[]){

Scanner sc = new Scanner(System.in);

int size ,arr[],cntArrElm[];

System.out.println("enter size of array and input elements");

size = sc.nextInt();

arr = new int[size];

cntArrElm = new int[10];

for(int i =0;i<10;i++) cntArrElm[i]=0;

for(int i = 0;i<size;i++) arr[i] = sc.nextInt();

for(int i = 0;i<size;i++) cntArrElm[arr[i]]++;

int sizec= size;

for(int i=size-1;i>=0;i--){

if(cntArrElm[arr[i]]>1){

if(i == size-1){

sizec--;

cntArrElm[arr[i]] --;

}

else{

cntArrElm[arr[i]] --;

sizec--;

for(int j = i;j<(size-1);j++)

arr[j]=arr[j+1];

}

}

}

for(int i = 0;i<sizec;i++)System.out.print(arr[i]+ " ");

}

}

6.

import java.util.\*;

class q6{

public static void main(String args[]){

Scanner sc =new Scanner(System.in);

int arr[];

System.out.println("enter no. of elements you want to enter");

int n = sc.nextInt();

arr = new int[n];

int cnt =0;

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

arr[i]=sc.nextInt();

if(arr[i]!=0)cnt++;

}

System.out.println("Total no of non zero elements in the array: "+cnt);

}

}

7.

import java.util.\*;

class q7{

public static void main(String args[]){

Scanner sc=new Scanner(System.in);

int arr[];

arr=new int[10];

System.out.println("Enter 10 elements to an array: ");

for (int i=0;i<10;i++) arr[i]=sc.nextInt();

for (int i=0;i<(10-1);i++){

for (int j=i+1;j<10;j++){

if (arr[i]+ arr[j] == 50)

System.out.println("( " + arr[i] + "," + arr[j] + " )" );

}

}

}

}

8.

import java.util.\*;

class q8{

public static void main(String args[]){

Scanner scn=new Scanner(System.in);

System.out.println("Enter the no. of elements in array: ");

int n=scn.nextInt();

int arr[];

arr= new int[n];

System.out.println("Enter the elements of the array: ");

for (int i=0;i<n;i++) arr[i]=scn.nextInt();

int min=arr[0];

for (int i=0;i<n-1;i++){

int temp =Math.abs(arr[i] - arr[i+1]);

if(min>temp)min=temp;

}

int a=0,b=0;

for (int i=0;i<n-1;i++){

if(min == Math.abs(arr[i] - arr[i+1])){

a= arr[i];

b= arr[i + 1];

break;

}

}

System.out.println("minimum distance is : "+min+" ( between "+a+" and "+b+" )");

}

}

9.

import java.util.\*;

class q9{

public static void main(String args[]){

Scanner sc=new Scanner(System.in);

System.out.println("How many elements you want to enter: ");

int n=sc.nextInt();

System.out.println("Enter the array: ");

int ar[]=new int[n];

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

ar[i]=sc.nextInt();

}

Arrays.sort(ar);

int total=1,ans=1;

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

if((ar[i]-1)==ar[i-1]) total++;

else{

ans=Math.max(ans,total);

total=1;

}

if(i==n-1){

ans=Math.max(ans,total);

}

}

System.out.println(ans);

}

}

10.

import java.util.\*;

class Date{

int day,year,month;

int leap=0,maxd=0;

int getleap(int year){

int l=0;

if(year%100==0 && year%400==0){

l=1;

}

else if(year%4==0 && year%100!=0) l=1;

else l=0;

return l;

}

int valuemonth(int month){

int maxday=0;

if(getleap(year)==1){

if(month==2) maxday=29;

}

else{

if(month==2) maxday=28;

}

if(month==1||month==3||month==5||month==7||month==8||month==10||month==12) maxday=31;

else if(month==4||month==6||month==9||month==11) maxday=30;

if(month<0 || month>12) return -1;

return maxday;

}

void display(){

System.out.println("dd/mm/year:"+day+"/"+month+"/"+year);

}

void validate(int day,int month,int year){

flag=0;

this.day=day;

this.year=year;

this.month=month;

leap=getleap(year);

maxd=valuemonth(month);

if(year>0){

if(maxd==-1) System.out.println("Given month is not valid");

else{

if(day<0 || day>maxd){

System.out.println("Given day is not valid");

}

else{

display();

}

}

}

else System.out.println("Given year is not valid");

}

}

class q10{

public static void main(String args[]){

Scanner sc=new Scanner(System.in);

System.out.println("Enter day,month,year in dd/mm/year format:");

int day=sc.nextInt();

int month=sc.nextInt();

int year=sc.nextInt();

Date ob=new Date();

ob.validate(day,month,year);

}

}

11.

import java.util.\*;

class Date{

int day,year,month;

int flag=0;

int leap=0,maxd=0;

int getleap(int year){

int l=0;

if(year%100==0 && year%400==0){

l=1;

}

else if(year%4==0 && year%100!=0) l=1;

else l=0;

return l;

}

int valuemonth(int month){

int maxday=0;

if(getleap(year)==1){

if(month==2) maxday=29;

}

else{

if(month==2) maxday=28;

}

if(month==1||month==3||month==5||month==7||month==8||month==10||month==12) maxday=31;

else if(month==4||month==6||month==9||month==11) maxday=30;

if(month<0 || month>12) return -1;

return maxday;

}

void display(){

System.out.println("dd/mm/year:"+day+"/"+month+"/"+year);

}

void validate(int day,int month,int year){

flag=0;

this.day=day;

this.year=year;

this.month=month;

leap=getleap(year);

maxd=valuemonth(month);

if(year>0){

if(maxd==-1) System.out.println("Given month is not valid");

else{

if(day<0 || day>maxd){

System.out.println("Given day is not valid");

}

else{

flag=1;

}

}

}

else System.out.println("Given year is not valid");

}

void incrementDate(int d,int m,int y){

validate(d,m,y);

if(flag==1){

day++;

if(day>maxd){

day=1;

month++;

if(month>12){

month=1;

year++;

}

}

display();

}

}

}

class q11{

public static void main(String args[]){

Scanner sc=new Scanner(System.in);

System.out.println("Enter day,month,year in dd/mm/year format:");

int day=sc.nextInt();

int month=sc.nextInt();

int year=sc.nextInt();

Date ob=new Date();

ob.incrementDate(day,month,year);

}

}

12.

import java.util.\*;

class Date{

int day,year,month;

int flag=0;

int leap=0,maxd=0;

int getleap(int year){

int l=0;

if(year%100==0 && year%400==0){

l=1;

}

else if(year%4==0 && year%100!=0) l=1;

else l=0;

return l;

}

int valuemonth(int month){

int maxday=0;

if(getleap(year)==1){

if(month==2) maxday=29;

}

else{

if(month==2) maxday=28;

}

if(month==1||month==3||month==5||month==7||month==8||month==10||month==12) maxday=31;

else if(month==4||month==6||month==9||month==11) maxday=30;

if(month<0 || month>12) return -1;

return maxday;

}

void display(){

System.out.println("dd/mm/year:"+day+"/"+month+"/"+year);

}

void validate(int day,int month,int year){

flag=0;

this.day=day;

this.year=year;

this.month=month;

leap=getleap(year);

maxd=valuemonth(month);

if(year>0){

if(maxd==-1) System.out.println("Given month is not valid");

else{

if(day<0 || day>maxd){

System.out.println("Given day is not valid");

}

else{

flag=1;

}

}

}

else System.out.println("Given year is not valid");

}

void compareTwo(int d,int m,int y,int d2,int m2,int y2){

validate(d,m,y);

if(flag==1){

validate(d2,m2,y2);

if(flag==1){

if(d==d2 &&m==m2&&y==y2){

System.out.println("Date are same");

}

else if(y>y2){

System.out.println("Date 1 is "+(y-y2)+" years ahead");

}

else if(y<y2){

System.out.println("Date 2 is "+(y2-y)+"years ahead");

}

else if(y==y2){

if(m>m2){

System.out.println("Date 1 is "+(m-m2)+" months ahead");

}

else if(m<m2){

System.out.println("Date 2 is "+(m2-m)+" months ahead");

}

else if(m==m2){

if(d>d2){

System.out.println("Date 1 is "+(d-d2)+" days ahead");

}

else{

System.out.println("Date 1 is "+(d2-d)+" days ahead");

}

}

}

}

else{

System.out.println("Date 2 is not valid");

}

}

else{

System.out.println("Date 1 is not valid");

}

}

}

class q12{

public static void main(String args[]){

Scanner sc=new Scanner(System.in);

System.out.println("Enter day,month,year in dd/mm/year format:");

int day=sc.nextInt();

int month=sc.nextInt();

int year=sc.nextInt();

System.out.println("Enter day,month,year in dd/mm/year format:");

int day2=sc.nextInt();

int month2=sc.nextInt();

int year2=sc.nextInt();

Date ob=new Date();

ob.compareTwo(day,month,year,day2,month2,year2);

}

}

13.

import java.util.\*;

class details{

Scanner sc=new Scanner(System.in);

String name,email;

int age;

void edetails(){

System.out.println("Enter the name");

name=sc.nextLine();

System.out.println("Enter the email");

email=sc.nextLine();

System.out.println("Enter the age");

age=sc.nextInt();

sc.nextLine();

}

void disdetails(){

System.out.println("Name:"+name);

System.out.println("Age:"+age);

System.out.println("Email:"+email);

}

}

class q13

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

String name,email;

int age;

System.out.println("How many employee are in deparment: ");

int n=sc.nextInt();

details[] ob;

ob=new details[n];

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

ob[i]=new details();

}

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

ob[i].edetails();

}

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

ob[i].disdetails();

}

System.out.println("Do you want to edit the informartion (y/n)");

char ans=sc.next().charAt(0);

if(ans=='y'||ans=='Y'){

System.out.println("Pick the index from 0 to "+(n-1));

int a=sc.nextInt();

System.out.println("Enter the new value");

ob[a].edetails();

System.out.println("After edit informartion are- ");

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

ob[i].disdetails();

}

}

}

}

14.

import java.util.\*;

class student{

Scanner sc=new Scanner(System.in);

String name;

int d,m,y;

int ar[]=new int[5];

float p,sum=0;

void edetails(){

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

name=sc.nextLine();

System.out.println("Enter the date of birth in dd//mm//yy format: ");

d=sc.nextInt();m=sc.nextInt();y=sc.nextInt();

System.out.println("Enter the five marks: ");

for(int i=0;i<5;i++){

ar[i]=sc.nextInt();

sum+=ar[i];

}

sc.nextLine();

p=sum/5;

}

void display(){

System.out.println("Name: "+name);

}

}

class q14

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

System.out.println("How many student are there: ");

int n=sc.nextInt();

student ob[]=new student[n];

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

ob[i]=new student();

}

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

ob[i].edetails();

}

System.out.println("Students which Percentage is less than 40% are: ");

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

if((ob[i].p) < 40){

ob[i].display();

}

}

}

}

15.

import java.util.\*;

class student{

Scanner sc=new Scanner(System.in);

String name;

int d,m,y;

int ar[]=new int[5];

float p,sum=0;

void edetails(){

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

name=sc.nextLine();

System.out.println("Enter the date of birth in dd//mm//yy format: ");

d=sc.nextInt();m=sc.nextInt();y=sc.nextInt();

System.out.println("Enter the five marks: ");

for(int i=0;i<5;i++){

ar[i]=sc.nextInt();

sum+=ar[i];

}

sc.nextLine();

p=sum/5;

}

void display(){

System.out.println("Name: "+name);

System.out.println("DOB: "+d+"/"+m+"/"+y);

}

}

class q15

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

System.out.println("How many student are there: ");

int n=sc.nextInt();

student ob[]=new student[n];

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

ob[i]=new student();

}

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

ob[i].edetails();

}

System.out.println("Students which Percentage is less than 40% are: ");

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

if((ob[i].p) < 40){

ob[i].display();

}

}

}

}

16.

import java.util.\*;

class hotel{

Scanner sc=new Scanner(System.in);

String name,add;

int nr,cr;

char g;

void edetails(){

System.out.println("Enter the hotel name: ");

name=sc.nextLine();

System.out.println("Enter the address: ");

add=sc.nextLine();

System.out.println("Enter the grade: ");

g=sc.next().charAt(0);

System.out.println("Enter the no. of rooms: ");

nr=sc.nextInt();

System.out.println("Enter the room charge: ");

cr=sc.nextInt();

sc.nextLine();

}

void display(){

System.out.println("Name: "+name);

System.out.println("Address: "+add);

System.out.println("Grade: "+g);

System.out.println("Room Charge: "+cr);

}

}

class q16

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

System.out.println("How many hotel are there: ");

int n=sc.nextInt();

hotel ob[]=new hotel[n];

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

ob[i]=new hotel();

}

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

ob[i].edetails();

}

System.out.println("Enter your budget: ");

int m=sc.nextInt();

System.out.println("Enter your grade: ");

char g=sc.next().charAt(0);

System.out.println("Hotel name by matching ur budget: ");

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

if((ob[i].cr)<=m){

ob[i].display();

}

}

System.out.println("Hotel name by matching ur Grade: ");

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

if((ob[i].g)==g){

ob[i].display();

}

}

}

}

**ASSIGNMENT\_4**

1.

import java.util.\*;

class q1 {

public static void main(String[] args) {

String results = "Manchester United 1 Chelsea 0, Arsenal 1 Manchester United 1, Manchester United 3 Fulham 1, Liverpool 2 Manchester United 1, Swansea 2 Manchester United 4";

String ans="Manchester United";

int count=0;

int j=0;

int temp=0;

int a=-1,b=-1,c=-1,d=-1,win=0,lose=0,draws=0,gscore=0,gconceded=0,npoints=0;

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

int getnum=0;

if(results.charAt(i) == ','){

a=-1;b=-1;c=-1;d=-1;

}

if(results.charAt(i) == ' '){

getnum=results.charAt(i+1) - '0';

if(getnum<10){

if(c==-1){

c=getnum;

}

else d=getnum;

}

}

if(results.charAt(i)==ans.charAt(j)){

j++;

}

else j=0;

if(j==(ans.length()-1)){

getnum=results.charAt(i+3) - '0';

if(getnum<10){

a=getnum;

}

j=0;

}

if(a!=-1 && c!=-1 && d!=-1){

if(a==c && a==d) b=c;

else if(a==c) b=d;

else b=c;

if(a>b){

win++;

}

else if(a<b){

lose++;

}

else{

draws++;

}

gscore+=a;

gconceded+=b;

a=-1;b=-1;c=-1;d=-1;

}

}

npoints=(3\*win)+draws;

System.out.println("Number of wins ="+win);

System.out.println("Number of draws ="+draws);

System.out.println("Number of defeats ="+lose);

System.out.println("Goals scored ="+gscore);

System.out.println("Goals conceded ="+gconceded);

System.out.println("Number of points ="+npoints);

}

}

2.

import java.util.\*;

class q2 {

public static void main(String[] args) {

System.out.println("Enter the string: ");

String g=sc.nextLine();

String n="";

int ar[]=new int[(g.length())];

int k=0;

for(int i=0;i<g.length();i++){

ar[k++]=g.charAt(i);

}

Arrays.sort(ar);

for(int i=0;i<g.length();i++){

char c=(char)ar[i];

n+=c;

}

System.out.println(n);

}

}

3.

import java.util.\*;

class opt{

int countYZ(String s){

int count=0;

for(int i=0;i<s.length();i++){

if(s.charAt(i)==' '){

if(s.charAt(i-1)=='y' || s.charAt(i-1)=='z') count++;

}

}

if(s.charAt((s.length()-1))=='y' || s.charAt((s.length()-1))=='z') count++;

return count;

}

}

class q3 {

public static void main(String[] args) {

System.out.println("Enter the string: ");

String g=sc.nextLine();

opt ob=new opt();

System.out.println(ob.countYZ(g));

}

}

4.

import java.util.\*;

class optional{

String deFront(String s){

String n="";

if((s.length())>0 && s.charAt(0)=='a'){

n+=s.charAt(0);

}

if((s.length())>1 && s.charAt(1)=='b'){

n+=s.charAt(1);

}

for(int i=2;i<s.length();i++){

n+=s.charAt(i);

}

return n;

}

}

class q4 {

public static void main(String[] args) {

System.out.println("Enter the string: ");

String g=sc.nextLine();

optional ob=new optional();

System.out.println(ob.deFront(g));

}

}