

JAVA PROGRAM

1.1

```
import java.util.Scanner;
class Wage{
    public static void main(String[] args){
        Scanner scanner=new Scanner(System.in);
        double a=scanner.nextDouble();
        double b=scanner.nextDouble();
        double c=scanner.nextDouble();
        double salary;
        double overtime;
        double deduction;
        if(a<0 || b<0){
            System.out.println("Invalid Input");}
        else{
            if(b>40){
                overtime=b-40;
                salary=overtime*a*1.5;
                salary=salary+(40*a);
                salary=salary*c;
                System.out.println("Total salary is "+salary);}

            else if(b<20){
                salary=b*a;
                deduction=0.1*salary;
                salary=salary-deduction;
                salary=salary*c;
                System.out.println("Total salary is "+salary);}

            else{
                salary=(b*a)*c;
                System.out.println("Total salary is "+salary);}}
    }
}
```

```
15.0
45
4
Total salary is 2850.0
```

1.2

```
import java.util.Scanner;
public class Ticket{
    public static void main(String[] args){
        Scanner sc=new Scanner(System.in);
        String k=sc.nextLine();
        double a=0,d;
        int b=sc.nextInt();
        switch(k){
            case "Regular":{
                a=50*b;
                if(a<200)
                    a+=20;
                if(b>10){
                    d=a*0.1;
                    a=a-d;}}
            break;
            case "VIP":{
                a=100*b;
                if(a<200){
                    a+=20;}
                if(b>5){
                    d=a*0.15;
                    a-=d;}}
            break;
            case "Premium":{
                a=150*b;
                if(a<200){
                    a+=20;}
                if(b<3){
                    d=a*0.20;
                    a-=d;}}
            break;}
        System.out.print(a);}}
```

```
VIP
5
500.0
```

1.3

```
import java.util.Scanner;
public class MaxMin{
public static void main ( String[] args){
Scanner sc=new Scanner (System.in);
int a =sc.nextInt();
int rem,i=0;
int[] ar = new int[10];
while (a!=0){
rem=a%10;
ar[i]=rem;
i=i+1;
a=a/10;
}
int max=ar[0],min=ar[0];
for (int j=1;j<i;j++){
if (ar[j]>max){
max=ar[j];
}
if (ar[j]<min){
min=ar[j];
}
}
System.out.print(max+" " +min);
}}
```

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8 1

1.4

i)

```
import java.util.Scanner;
public class Pattern1{
public static void main (String[]args){
Scanner sc=new Scanner(System.in);
int n=sc.nextInt();
int b=n,j=1;
for (int i=j;i<=n;i++){
while (j<=b){
System.out.print(j+" ");
j+=1;
}
System.out.println();
b=b-1;
j=1;
}
}}
```

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

ii)

```
import java.util.Scanner;
public class Pattern2{
public static void main (String[]args){
Scanner sc=new Scanner(System.in);
int n=sc.nextInt();
for (int i=1;i<=n;i++){
if (i%2==1){
for (int j=1;j<=i;j++){
System.out.print(j%2);}
}
else {
for (int j=0;j<i;j++){
System.out.print(j%2);}
}
System.out.println();
}}}
```

```
5
1
01
101
0101
10101
```

1.5

```
import java.util.Scanner;
public class Days{
public static void main (String[]args){
Scanner sc =new Scanner(System.in);
String a=sc.nextLine();
String b="It's a weekday.";
String c="It's a weekend.";
switch (a){
case "Monday":{System.out.print(b);break;}

case "Tuesday":{System.out.print(b);break;}

case "Wednesday":{System.out.print(b);break;}

case "Thursday":{System.out.print(b);break;}

case "Friday": {System.out.print(b);break;}
case "Saturday":{System.out.print(c);break;}
case "Sunday":{System.out.print(c);break;}
}
}}
```

```
Thursday
It's a weekday.
```

1.6

```
import java.util.Scanner;
public class Strong{
public static void main (String[] args ){
Scanner sc = new Scanner(System.in);
int a=sc.nextInt();
int p=a,b,f=1,s=0;
while (p!=0){
b=p%10;
while (b!=0){
f=f*b;
b-=1;
}
s+=f;
f=1;
p/=10;
}
if (a==s){
System.out.print("Its a Strong Number.");
}
else {
System.out.print("Its not a Strong Number.");
}
}}
```

145

Its a Strong Number.

2.1

```
import java.util.Scanner;
public class Occurrence{
public static void main (String[] args ){
int a,c=0,d=1 ;
Scanner sc=new Scanner(System.in);
a=sc.nextInt();
int [] arr=new int[a];
for (int i=0;i<a;i++){
arr[i]=sc.nextInt();
}
int k=sc.nextInt();
while (d!=0){
for (int i=0;i<a;i++){
if (arr[i]==k){
c++;
}
}
if (c!=0){
k=k*2;
c=0;
continue;
}
else {
d=0;
}
}
System.out.print(k);
}}
```

```
5
5
3
6
1
12
3
24
```

2.2

```
import java.util.Scanner;

public class Stock{
public static void main (String[] args ){
Scanner sc=new Scanner (System.in);
int a=sc.nextInt();
int []arr=new int[a];
int min,max,minin=0,maxin=0,profit;
    for (int i=0;i<a;i++){
arr[i]=sc.nextInt();
    }
min=arr[0];max=arr[0];
for (int i=0;i<a;i++){
    if (arr[i]<min){
        min=arr[i]; minin=i;
    }
    if (arr[i]>max){
        max=arr[i]; maxin=i;
    }
}

if (maxin>minin){
profit=max-min;
}
else {
max=arr[minin];maxin=0;
for (int i=minin;i<a;i++){
    if (arr[i]>max){
        max=arr[i];
        maxin=i;}
    }
profit=max-min;
}
System.out.print(profit);
}}
```

6
7
1
5
3
6
4
5

2.3

```
import java.util.Scanner;
import java.util.Arrays;
public class ZeroOneTwo{
    public static void main(String[] args){
        Scanner sc=new Scanner(System.in);
        int a=sc.nextInt();
        int []arr=new int[a];
        for(int i=0;i<a;i++){
            arr[i]=sc.nextInt();}

        Arrays.sort(arr);
        System.out.print(Arrays.toString(arr));}}
```

```
6
0
2
2
1
0
1
[0, 0, 1, 1, 2, 2]
```

2.4

```
import java.util.Scanner;
public class Missing{
    public static void main (String[]args){
        Scanner sc=new Scanner (System.in);
        int a=sc.nextInt(),temp;
        int [] arr=new int [a];
        for (int i=0;i<a-1;i++){
            arr[i]=sc.nextInt();
        }

        for (int i=0;i<a-1;i++){
            for (int j=0;j<a-1;j++){
                if (arr[i]<arr[j]){
                    temp=arr[i];
                    arr[i]=arr[j];
                    arr[j]=temp;
                }
            }

            for (int i=0;i<a-1;i++){
                if (arr[i] !=i+1){
                    System.out.print(i+1);
                    break;
                }
            }
        }
    }
}
```

5
1
3
4
5
2

2.5

```
import java.util.Scanner;
public class Move{
    public static void main (String[]args){
        Scanner sc=new Scanner (System.in);
        int j=0;
        int a = sc.nextInt();
        int [] arr=new int [a];
        int [] brr=new int [a];
        for (int i=0;i<a;i++){
            arr[i]=sc.nextInt();
            if (arr[i] ==0){
                continue;
            }
            else {
                brr[j]=arr[i];
                j++;
            }
        }

        for (int i=0;i<a;i++){
            System.out.print(brr[i]+" ");
        }

    }
}
```

```
6
1
0
0
2
0
3
1 2 3 0 0 0
```