1. 1.Electricity bill :

**package** javaprogram;

**import** java.util.Scanner;

**public** **class** electricitybill {

**public** **static** **void** main(String[] args) {

**int** units, old\_reading, current\_reading;

Scanner sc = **new** Scanner(System.***in***);

old\_reading = sc.nextInt();

current\_reading = sc.nextInt();

units = current\_reading - old\_reading;

**int** bill = 0;

**if**(units >= 0 && units <= 50)

{

bill = units \* 1;

}

**else** **if**(units >= 51 && units <= 100)

{

bill = 50 \* 1 + (units - 50) \* 2;

}

**else** **if**(units >= 101 && units <= 200)

{

bill = 50 \* 1 + 50 \* 2 + (units - 100) \* 3;

}

**else** **if**(units >= 201 && units <= 400)

{

bill = 50 \* 1 + 50 \* 2 + 100 \* 3 + (units - 200) \* 4;

}

**else**

{

bill = 50 \* 1 + 50 \* 2 + 100 \* 3 + 200 \* 4 + (units - 400) \* 5;

}

System.***out***.println("Units consumed: " + units);

System.***out***.println("Total Bill: Rs." + bill);

sc.close();

}

}

2.Calculator :

**package** javaprogram;

**import** java.util.Scanner;

**public** **class** calculator {

**public** **static** **void** main(String[] args) {

**int** a,b;

**char** ch;

Scanner sc = **new** Scanner(System.***in***);

System.***out***.println("enter any value : ");

a=sc.nextInt();

System.***out***.println("enter any value : ");

b=sc.nextInt();

System.***out***.println("+ : Addition \n - : Subtraction \n \* : Multiplication \n / : Division ");

System.***out***.println("enter any operator : ");

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

**switch**(ch) {

**case** '+' : System.***out***.println("result is : "+ (a+b));**break**;

**case** '-' : System.***out***.println("result is : "+ (a-b));**break**;

**case** '\*' : System.***out***.println("result is : "+ (a\*b));**break**;

**case** '/' : System.***out***.println("result is : "+ (a/b));**break**;

**default** : System.***out***.println("invalid choice");

}

sc.close();

}

}

3. Pattern1 :

**package** javaprogram;

**import** java.util.Scanner;

**public** **class** pattern1 {

**public** **static** **void** main(String[] args) {

**int** n,i,j;

System.***out***.println("enter size of pattern : ");

Scanner sc = **new** Scanner(System.***in***);

n=sc.nextInt();

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

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

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

}

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

}

}

}

Pattern2 :

**package** javaprogram;

**import** java.util.Scanner;

**public** **class** pattern2 {

**public** **static** **void** main(String[] args) {

**int** n, i, j, k;

System.***out***.println("Enter size of pattern: ");

Scanner sc = **new** Scanner(System.***in***);

n = sc.nextInt();

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

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

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

}

**for** (k = 1; k <= i; k++) {

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

}

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

}

sc.close();

}

}

pattern 3:

public class Main

{

public static void main(String[] args) {

int i,j,k;

int n=4;

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

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

System.out.print(" ");

}

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

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

}

System.out.println();

}

for (i = n-1; i >= 1; i--) {

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

System.out.print(" ");

}

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

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

}

System.out.println();

}

}

}

pattern 4:

public class Main

{

public static void main(String[] args) {

int i,j,k;

int n=4;

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

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

System.out.print(" ");

}

for(k=1;k<=i;k++){

System.out.print(k);

}

for(k=i-1;k>=1;k--){

System.out.print(k);

}

System.out.println();

}

}

}

5.Duplicates in array :

**package** project1;

**public** **class** array {

**public** **static** **void** main(String[] args) {

**int** arr[]= {1,2,1,4,5,8,3,5,2,8,7};

**int** n=arr.length;

System.***out***.println("the duplicate values of given array are : ");

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

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

**if** (arr[i]==arr[j]) {

System.***out***.println(arr[i]);

**break**;

}

}

}

}

}

5.c Common elements of array

**package** project1;

**public** **class** array {

**public** **static** **void** main(String[] args) {

String s1= "exam";

String s2 ="examination";

**char** letter[]=s1.toCharArray();

**char** letter1[]=s2.toCharArray();

**int** n=s1.length();

**int** m=s2.length();

System.***out***.println("the same values of given two array are : ");

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

**for**(**int** j=0;j<m;j++) {

**if** (letter1[i]==letter1[j]) {

System.***out***.println(letter[i]);

**break**;

}

}

}

}

}