**1.Program  
import java.util.\*;  
public class Main  
{  
static void add()  
{  
int a,b,c;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of a and  
b:");  
a=sc.nextInt();  
b=sc.nextInt();  
c=a+b;  
System.out.println("sum is:"+c);  
}**

**public static void main(String[] args) {  
add();  
}  
}  
2.factorial no para no return  
import java.util.\*;  
public class Main  
{  
static void fact()  
{  
int n,i,f1=1;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of n:");  
n=sc.nextInt();**

**for(i=n;i>=1;i--)  
f1=f1\*i;  
System.out.println("factorial is:"+f1);  
}  
public static void main(String[] args) {  
fact();  
}  
}  
Output:  
enter the value of n:  
5  
factorial is:120  
3. factorial no para with return.  
import java.util.\*;**

**public class Main {  
public static int calculateFactorial() {  
int number;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
number:");  
number=sc.nextInt();  
int factorial = 1;  
for (int i = 1; i <= number; i++) {  
factorial \*= i;  
}  
return factorial;  
}**

**public static void main(String[] args) {  
int result = calculateFactorial();  
System.out.println("The factorial is: " +  
result);  
}  
}  
Output:  
enter the value of number:  
5  
The factorial is: 120  
4. prime using function  
import java.util.\*;**

**public class Main {  
static void prime() {  
int number,flag=0,i;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
number:");  
number=sc.nextInt();  
for(i=2;i<=number/2;i++)  
{  
if(number%2==0)  
{  
flag=1;  
break;  
}  
}**

**if(flag==0)  
{  
System.out.println("number is prime");  
}  
else{  
System.out.println("number is not prime");  
}  
}  
public static void main(String[] args) {  
prime();  
}  
}  
Output:  
enter the value of number:**

**5  
number is prime  
5.prime using no parameter with return value  
import java.util.\*;  
public class Main {  
public static String prime() {  
int number,flag=0,i;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
number:");  
number=sc.nextInt();  
for(i=2;i<=number/2;i++)  
{  
if(number%2==0)**

**{  
flag=1;  
break;  
}  
}  
if(flag==0)  
{  
return "number is prime" ;  
}  
else{  
return "number is not prime";  
}  
}  
public static void main(String[] args) {**

**String s1=prime();  
System.out.println(" "+s1);  
}  
}  
Output:  
enter the value of number:  
4  
number is not prime  
6. Armstrong  
import java.util.\*;  
public class Main {  
static void armstrong() {  
int n,n1,i,sum=0,p=0;  
Scanner sc=new Scanner(System.in);**

**System.out.println("enter the value of  
number:");  
n=sc.nextInt();  
p=n;  
while(n>0)  
{  
n1=n%10;  
n=n/10;  
sum=sum+n1\*n1\*n1;  
}  
if(sum==p)  
{  
System.out.println("number is armstrong")  
;  
}**

**else{  
System.out.println("number is not  
armstrong") ;  
}  
}  
public static void main(String[] args) {  
armstrong();  
}  
}  
Output:  
enter the value of number:  
153  
number is Armstrong**

**7. Armstrong using with parameter no return  
import java.util.\*;  
public class Main {  
public static String armstrong() {  
int n,n1,i,sum=0,p=0;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
number:");  
n=sc.nextInt();  
p=n;  
while(n>0)  
{  
n1=n%10;  
n=n/10;**

**sum=sum+n1\*n1\*n1;  
}  
if(sum==p)  
{  
return "number is armstrong" ;  
}  
else{  
return "number is not armstrong";  
}  
}  
public static void main(String[] args) {  
String s1=armstrong();  
System.out.println(" "+s1);  
}**

**}  
Output:  
enter the value of number:  
153  
number is Armstrong  
8.disarium  
import java.util.\*;  
public class Main {  
static void disarium() {  
int n,n1,i=0,rev=0,res=0,s=0,sum=0,p=0;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
number:");**

**n=sc.nextInt();  
p=n;  
while(p>0)  
{  
rev=p%10;  
s=s\*10+rev;  
p=p/10;  
}  
while(s>0)  
{  
res=s%10;  
i++;  
sum=sum+(int)Math.pow(res,i);  
s=s/10;  
}**

**if(sum==n){  
System.out.println(n+" is a disarium  
number");  
}  
else{  
System.out.println(n+" is not disarium  
number");  
}  
}  
public static void main(String[] args) {  
disarium();  
}  
}**

**Output:  
enter the value of number:  
135  
135 is a disarium number  
9. disarium using no parameter with return value.  
import java.util.\*;  
public class Main {  
public static String disarium() {  
int n,n1,i=0,rev=0,res=0,s=0,sum=0,p=0;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
number:");  
n=sc.nextInt();  
p=n;**

**while(p>0)  
{  
rev=p%10;  
s=s\*10+rev;  
p=p/10;  
}  
while(s>0)  
{  
res=s%10;  
i++;  
sum=sum+(int)Math.pow(res,i);  
s=s/10;  
}  
if(sum==n){  
return n+" is a disarium number";**

**}  
else{  
return n+" is not disarium number";  
}  
}  
public static void main(String[] args) {  
String d1=disarium();  
System.out.println(" "+d1);  
}  
}  
Output:  
enter the value of number:  
135**

**135 is a disarium number  
10.max from an array  
import java.util.\*;  
public class Main {  
private static int[] numbers = {3, 5, 7, 2, 8, -1, 4,  
10, 12};  
public static int findMax() {  
int max = numbers[0];  
for (int i = 1; i < numbers.length; i++) {  
if (numbers[i] > max) {  
max = numbers[i];  
}  
}**

**return max;  
}  
public static void main(String[] args) {  
int maxValue = findMax();  
System.out.println("The maximum value in  
the array is: " + maxValue);  
}  
}  
Output:  
The maximum value in the array is: 12**

**11. max from an array using no parameter with  
return value  
public class Main {  
public static void main(String[] args) {  
int[] numbers = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10};  
findMax(numbers);  
}  
public static void findMax(int[] arr) {  
int max = arr[0];  
for (int i = 1; i < arr.length; i++) {  
if (arr[i] > max) {  
max = arr[i];  
}**

**}  
System.out.println("The maximum value in  
the array is: " + max);  
}  
}  
Output:  
The maximum value in the array is: 10  
12.area of circle.  
import java.util.\*;  
public class Main  
{  
static void circle()  
{  
double r,area;**

**Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
radius:");  
r=sc.nextInt();  
area=3.14\*r\*r;  
System.out.println("area is:"+area);  
}  
public static void main(String[] args) {  
circle();  
}  
}  
Output:  
enter the value of radius:  
3  
area is:28.259999999999998**

**13. area of circle using no parameter and with  
return value.  
import java.util.\*;  
public class Main  
{  
public static double circle()  
{  
double r,area=0;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
radius:");  
r=sc.nextInt();  
area=3.14\*r\*r;**

**return area;  
}  
public static void main(String[] args) {  
double c1 = circle();  
System.out.println("area is:"+c1);  
}  
}  
Output:  
enter the value of radius:  
3  
area is:28.259999999999998  
14.swap  
import java.util.\*;  
public class Main**

**{  
static void swap()  
{  
int a,b,temp;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of a and  
b:");  
a=sc.nextInt();  
b=sc.nextInt();  
temp=a;  
a=b;  
b=temp;  
System.out.println("a:"+a );  
System.out.println("b:"+b );**

**}  
public static void main(String[] args) {  
swap();  
}  
}  
Output:  
enter the value of a and b:  
4  
5  
a:5  
b:4  
15. swap using no parameter with return value.  
import java.util.\*;**

**public class Main {  
static int[] swapValuesUsingThirdVariable()  
{  
int m = 9, n = 5;  
int temp = m;  
m = n;  
n = temp;  
int []a=new int[2];  
a[0]=m;  
a[1]=n;  
return a;  
}  
static int[] pronic\_r() {  
int i,n,f,p,k=0;**

**System.out.println("Enter n");  
Scanner sc=new Scanner(System.in);  
n=sc.nextInt();  
int []a=new int[n];  
int []b=new int[n];  
System.out.println("Enter "+n+" values");  
for(i=0;i<n;i++) {  
a[i]=sc.nextInt();  
}  
int flag;  
for(int j=0;j<n;j++) {  
p=a[j];  
flag=0;  
for(i=1;i<p;i++) {  
f=i\*(i+1);**

**if(f==p) {  
flag=1;  
break;  
}  
}  
if(flag==1)  
b[k++]=a[j];  
}  
return b;  
}  
public static void main(String[] args)  
{  
int []a=new int[2];  
a=swapValuesUsingThirdVariable();**

**System.out.println("a="+a[0]+"b="+a[1]);  
}  
}  
Output:  
a=5 b=9  
16.Print pronic number of array.  
import java.util.\*;  
public class Main {  
static int[] pronic\_r() {  
int i,n,f,p,k=0;  
System.out.println("Enter n");  
Scanner sc=new Scanner(System.in);  
n=sc.nextInt();  
int []a=new int[n];**

**int []b=new int[n];  
System.out.println("Enter "+n+" values");  
for(i=0;i<n;i++) {  
a[i]=sc.nextInt();  
}  
int flag;  
for(int j=0;j<n;j++) {  
p=a[j];  
flag=0;  
for(i=1;i<p;i++) {  
f=i\*(i+1);  
if(f==p) {  
flag=1;  
break;  
}**

**}  
if(flag==1)  
b[k++]=a[j];  
}  
return b;  
}  
public static void main(String[] args)  
{  
int []a1=new int[20];  
a1=pronic\_r();  
System.out.println("Pronic");  
for(int i=0;i<a1.length;i++)  
System.out.println(""+a1[i]);  
}  
}**

**Output:  
Enter n  
5  
Enter 5 values  
4  
5  
1  
2  
6  
Pronic  
2  
6  
0  
0  
0**

**17. Print pronic number of array. Using no  
parameter with return value  
import java.util.\*;  
public class Main {  
static void pronic\_r() {  
Scanner in = new Scanner(System.in);  
System.out.print("Enter the number to check:  
");  
int num = in.nextInt();  
boolean isPronic = false;  
for (int i = 1; i <= num - 1; i++) {  
if (i \* (i + 1) == num) {**

**isPronic = true;  
break;  
}  
}  
if (isPronic)  
System.out.println(num + " is a pronic  
number");  
else  
System.out.println(num + " is not a pronic  
number");  
}  
public static void main (String[] args){  
pronic\_r();  
}**

**}  
Output:  
Enter the number to check: 20  
20 is a pronic number  
######################\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
\*\*\*17-july-  
2024\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*##  
################  
18.factorial using with parameter no return  
value.  
import java.util.\*;  
public class Main {  
static void fact(int n)  
{  
int i,f1=1;**

**for(i=n;i>=1;i--)  
{  
f1=f1\*i;  
}  
System.out.println("fact =" +f1);  
}  
public static void main(String[] args)  
{  
int n;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the number:");  
n=sc.nextInt();  
fact(n);  
}  
}**

**Output:  
enter the number:  
5  
fact =120  
19. factorial using with parameter with return  
value.  
import java.util.\*;  
public class Main {  
public static int fact(int n)  
{  
int i,f1=1;  
for(i=n;i>=1;i--)  
{  
f1=f1\*i;**

**}  
return (f1);  
}  
public static void main(String[] args)  
{  
int n,f1;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the number:");  
n=sc.nextInt();  
f1=fact(n);  
System.out.println("fact is:"+f1);  
}  
}  
Output:  
enter the number:**

**5  
fact is:120  
20.prime using with parameter no return value.  
import java.util.\*;  
public class Main {  
static void prime(int n)  
{  
int i,flag=0;  
for(i=2;i<=n/2;i++)  
{  
if(n%i==0)  
{  
flag=1;  
break;**

**}  
}  
if(flag==0)  
{  
System.out.println("number is prime");  
}  
else{  
System.out.println("number is not prime");  
}  
}  
public static void main(String[] args)  
{  
int n,f1;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the number:");**

**n=sc.nextInt();  
prime(n);  
}  
}  
Output:  
enter the number:  
5  
number is prime  
21.prime using with parameter with return value  
import java.util.\*;  
public class Main {  
public static String prime(int n)  
{  
int i,flag=0;**

**for(i=2;i<=n/2;i++)  
{  
if(n%i==0)  
{  
flag=1;  
break;  
}  
}  
if(flag==0)  
{  
return "number is prime";  
}  
else{  
return "number is not prime";  
}**

**}  
public static void main(String[] args)  
{  
int n,f1;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the number:");  
n=sc.nextInt();  
System.out.println(" "+prime(n));  
}  
}  
Output:  
enter the number:  
5  
number is prime**

**22 .armstrong using with parameter no return  
value  
import java.util.\*;  
public class Main {  
static void armstrong(int n) {  
int p,sum=0,n1;  
p=n;  
while(n>0)  
{  
n1=n%10;  
n=n/10;  
sum=sum+n1\*n1\*n1;  
}  
if(sum==p)**

**{  
System.out.println("number is armstrong")  
;  
}  
else{  
System.out.println("number is not  
armstrong") ;  
}  
}  
public static void main(String[] args) {  
int n;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
number:");  
n=sc.nextInt();  
armstrong(n);**

**}  
}  
Output:  
enter the value of number:  
153  
number is Armstrong  
23.armstrong with parameter with returen value.  
import java.util.\*;  
public class Main {  
static String armstrong(int n) {  
int p,sum=0,n1;  
p=n;  
while(n>0)  
{**

**n1=n%10;  
n=n/10;  
sum=sum+n1\*n1\*n1;  
}  
if(sum==p)  
{  
return "number is armstrong" ;  
}  
else{  
return "number is not armstrong" ;  
}  
}  
public static void main(String[] args) {  
int n;  
Scanner sc=new Scanner(System.in);**

**System.out.println("enter the value of  
number:");  
n=sc.nextInt();  
System.out.println(" "+armstrong(n));  
}  
}  
Output:  
enter the value of number:  
2  
number is not Armstrong  
24. Dissarium using with parameter no return  
value.  
import java.util.\*;**

**public class Main {  
static void disarium(int n) {  
int n1,i=0,rev=0,res=0,s=0,sum=0,p=0;  
p=n;  
while(p>0)  
{  
rev=p%10;  
s=s\*10+rev;  
p=p/10;  
}  
while(s>0)  
{  
res=s%10;  
i++;  
sum=sum+(int)Math.pow(res,i);**

**s=s/10;  
}  
if(sum==n){  
System.out.println(n+" is a disarium  
number");  
}  
else{  
System.out.println(n+" is not disarium  
number");  
}  
}  
public static void main(String[] args) {  
int n,n1,i=0,rev=0,res=0,s=0,sum=0,p=0;  
Scanner sc=new Scanner(System.in);**

**System.out.println("enter the value of  
number:");  
n=sc.nextInt();  
disarium(n);  
}  
}  
Output:  
enter the value of number:  
145  
145 is not disarium number  
25. Dissarium using with parameter with return  
value.  
import java.util.\*;  
public class Main {**

**public static String disarium(int n) {  
int n1,i=0,rev=0,res=0,s=0,sum=0,p=0;  
p=n;  
while(p>0)  
{  
rev=p%10;  
s=s\*10+rev;  
p=p/10;  
}  
while(s>0)  
{  
res=s%10;  
i++;  
sum=sum+(int)Math.pow(res,i);  
s=s/10;**

**}  
if(sum==n){  
return n+" is a disarium number";  
}  
else{  
return n+" is not disarium number";  
}  
}  
public static void main(String[] args) {  
int n,n1,i=0,rev=0,res=0,s=0,sum=0,p=0;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
number:");  
n=sc.nextInt();**

**System.out.println(" "+disarium(n));  
}  
}  
Output:  
enter the value of number:  
135  
135 is a disarium number  
26.area of circle using with parameter with  
return value.  
import java.util.\*;  
public class Main  
{  
static double circle(double r)  
{**

**double area;  
area=3.14\*r\*r;  
return area;  
}  
public static void main(String[] args) {  
double r,area;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
radius:");  
r=sc.nextDouble();  
System.out.println("area is: "+circle(r));  
}  
}  
Output:  
enter the value of radius:**

**5  
area is: 78.5  
27. area of circle using with parameter no return  
value.  
import java.util.\*;  
public class Main  
{  
static void circle(double r)  
{  
double area;  
area=3.14\*r\*r;  
System.out.println("area is:"+area);  
}  
public static void main(String[] args) {**

**double r,area;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
radius:");  
r=sc.nextDouble();  
circle(r);  
}  
}  
Output:  
enter the value of radius:  
5  
area is:78.5  
28.swap using with parameter no return value.  
import java.util.\*;**

**public class Main {  
static void swapValuesUsingThirdVariable(int  
m, int n)  
{  
int temp = m;  
m = n;  
n = temp;  
int []a=new int[2];  
a[0]=m;  
a[1]=n;  
System.out.println("a="+a[0] +"b="+a[1]);  
}**

**public static void main(String[] args)  
{  
int m = 9, n = 5;  
swapValuesUsingThirdVariable();  
}  
}  
29. swap using with parameter with return value.  
public class Main {  
public static int[] swap(int a, int b) {  
int temp = a;  
a = b;**

**b = temp;  
return new int[]{a, b};  
}  
public static void main(String[] args) {  
int x = 5;  
int y = 10;  
int[] swappedValues = swap(x, y);  
x = swappedValues[0];  
y = swappedValues[1];  
System.out.println("After swapping:");  
System.out.println("x = " + x + ", y = " + y);**

**}  
}  
Output:  
After swapping:  
x = 10, y = 5x = 10, y = 5  
30. pronic number on array using with parameter  
no return value.  
import java.util.\*;  
public class Main {  
static void pronic\_r(int num) {  
boolean isPronic = false;  
for (int i = 1; i <= num - 1; i++) {**

**if (i \* (i + 1) == num) {  
isPronic = true;  
break;  
}  
}  
if (isPronic)  
System.out.println(num + " is a pronic  
number");  
else  
System.out.println(num + " is not a pronic  
number");  
}  
public static void main (String[] args){  
Scanner in = new Scanner(System.in);**

**System.out.print("Enter the number to check:  
");  
int num = in.nextInt();  
pronic\_r(num);  
}  
}  
Output:  
Enter the number to check: 35  
35 is not a pronic number  
31. pronic number on array using with parameter  
with return value.  
import java.util.\*;  
public class Main {  
static String pronic\_r(int num) {**

**boolean isPronic = false;  
for (int i = 1; i <= num - 1; i++) {  
if (i \* (i + 1) == num) {  
isPronic = true;  
break;  
}  
}  
if (isPronic)  
return num + " is a pronic number";  
else  
return num + " is not a pronic number";  
}**

**public static void main (String[] args){  
Scanner in = new Scanner(System.in);  
System.out.print("Enter the number to check:  
");  
int num = in.nextInt();  
System.out.println(" "+pronic\_r(num));  
}  
}  
Output:  
Enter the number to check: 56  
56 is a pronic number  
32. write a java program of max number in array  
using with parameter and no return value.  
public class Main {**

**public static void main(String[] args) {  
int[] numbers = {3, 5, 7, 2, 8, 6, 4, 10, 1};  
findAndPrintMax(numbers);  
}  
public static void findAndPrintMax(int[] array) {  
if (array == null || array.length == 0) {  
System.out.println("Array is empty or  
null.");  
return;  
}**

**int max = array[0];  
for (int i = 1; i < array.length; i++) {  
if (array[i] > max) {  
max = array[i];  
}  
}  
System.out.println("The maximum number in  
the array is: " + max);  
}  
}  
Output:  
The maximum number in the array is: 10  
33. write  
a java program of max number in array  
using with parameter and no return value.**

**public class Main {  
public static int findMax(int[] numbers) {  
int max = numbers[0];  
for (int i = 1; i < numbers.length; i++) {  
if (numbers[i] > max) {  
max = numbers[i];  
}  
}  
return max;  
}  
public static void main(String[] args) {**

**int[] numbers = {3, 5, 7, 2, 8, -1, 4, 10, 12};  
int maxNumber = findMax(numbers);  
System.out.println("The maximum number in  
the array is: " + maxNumber);  
}  
}  
Output:  
The maximum number in the array is: 12  
###############\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
\*\*\*\*18-july-  
2024\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*#########  
###########  
34.write a java program of using four function.  
import java.util.\*;**

**public class Main  
{  
static void sub1()  
{  
int a,b,c;  
Scanner sc=new Scanner(System.in);  
System.out.println("Enter two numbers:");  
a=sc.nextInt();  
b=sc.nextInt();  
c=a-b;  
System.out.println("sub="+c);  
}  
static int sub2()  
{  
int a,b,c;**

**Scanner sc=new Scanner(System.in);  
System.out.println("Enter two numbers:");  
a=sc.nextInt();  
b=sc.nextInt();  
c=a-b;  
return c;  
}  
static void sub3(int a,int b)  
{  
int c;  
c=a-b;  
System.out.println("Sub="+c);**

**}  
static int sub4(int a,int b)  
{  
int c;  
c=a-b;  
return c;  
}  
public static void main(String[] args)  
{  
int a,b;  
sub1();  
int c=sub2();  
System.out.println("sub="+c);**

**Scanner sc=new Scanner(System.in);  
System.out.println("Enter two numbers:");  
a=sc.nextInt();  
b=sc.nextInt();  
sub3(a,b);  
c=sub4(a,b);  
System.out.println("sub="+c);  
}  
}  
Output:  
Enter two numbers:  
2  
4**

**sub=-2  
Enter two numbers:  
5  
7  
sub=-2  
Enter two numbers:  
2  
6  
Sub=-4  
sub=-4  
35.java progam of sum of digit using four  
function.  
import java.util.\*;  
public class Main**

**{  
static void sum() {  
int n1,sum=0;  
Scanner sc = new Scanner(System.in);  
System.out.println("Enter number");  
int n=sc.nextInt();  
while(n>0) {  
n1=n%10;  
sum+=n1;  
n=n/10;  
}  
System.out.println("Sum "+sum);  
}  
static void sum\_p(int n) {**

**int n1,sum=0;  
while(n>0) {  
n1=n%10;  
sum+=n1;  
n=n/10;  
}  
System.out.println("Sum "+sum);  
}  
static int sum\_r() {  
int n1,sum=0;  
Scanner sc = new Scanner(System.in);  
System.out.println("Enter number");  
int n=sc.nextInt();  
while(n>0) {**

**n1=n%10;  
sum+=n1;  
n=n/10;  
}  
return sum;  
}  
static int sum\_pr(int n) {  
int n1,sum=0;  
while(n>0) {  
n1=n%10;  
sum+=n1;  
n=n/10;  
}  
return sum;**

**}  
public static void main(String[] args) {  
int ch,n;  
do{  
Scanner sc = new Scanner(System.in);  
System.out.println("1.No para No  
return\n2.With para No return\n3.No para With  
return\n4.With para With return\n5.Exit");  
ch=sc.nextInt();  
switch(ch) {  
case 1:  
sum();  
break;  
case 2:**

**System.out.println("Enter number");  
n=sc.nextInt();  
sum\_p(n);  
break;  
case 3:  
System.out.println("Sum "+sum\_r());  
break;  
case 4:  
System.out.println("Enter number");  
n=sc.nextInt();  
System.out.println("Sum  
"+sum\_pr(n));  
break;  
case 5:  
System.exit(1);**

**break;  
default:  
System.out.println("Enter Valid  
options");  
break;  
}  
}while(true);  
}  
}  
Output:  
1.No para No return  
2.With para No return  
3.No para With return  
4.With para With return  
5.Exit**

**3  
Enter number  
123  
Sum 6  
1.No para No return  
2.With para No return  
3.No para With return  
4.With para With return  
5.Exit  
36.prime  
import java.util.\*;  
public class Main  
{**

**static void prime() {  
int number,flag=0,i;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
number:");  
number=sc.nextInt();  
for(i=2;i<=number/2;i++)  
{  
if(number%2==0)  
{  
flag=1;  
break;  
}  
}  
if(flag==0)**

**{  
System.out.println("number is prime");  
}  
else{  
System.out.println("number is not prime");  
}  
}  
public static String prime1()  
{  
int number,flag=0,i;  
Scanner sc=new Scanner(System.in);  
System.out.println("enter the value of  
number:");  
number=sc.nextInt();**

**for(i=2;i<=number/2;i++)  
{  
if(number%2==0)  
{  
flag=1;  
break;  
}  
}  
if(flag==0)  
{  
return "number is prime" ;  
}  
else{  
return "number is not prime";  
}**

**}  
static void prime2(int n)  
{  
int i,flag=0;  
for(i=2;i<=n/2;i++)  
{  
if(n%i==0)  
{  
flag=1;  
break;  
}  
}  
if(flag==0)  
{**

**System.out.println("number is prime");  
}  
else{  
System.out.println("number is not prime");  
}  
}  
public static String prime3(int n)  
{  
int i,flag=0;  
for(i=2;i<=n/2;i++)  
{  
if(n%i==0)  
{  
flag=1;**

**break;  
}  
}  
if(flag==0)  
{  
return "number is prime";  
}  
else{  
return "number is not prime";  
}  
}  
public static void main(String[] args)  
{  
int choice;  
do**

**{  
Scanner sc=new Scanner(System.in);  
System.out.println("1. no para no return \n2. no  
para with return \n 3.with para no return \n  
4.with parameter with return");  
choice =sc.nextInt();  
switch(choice)  
{  
case 1:  
prime();  
break;  
case 2:  
String s1=prime1();  
System.out.println(" "+s1);**

**break;  
case 3:  
int n,f1;  
System.out.println("enter the number:");  
n=sc.nextInt();  
prime2(n);  
break;  
case 4:  
n=sc.nextInt();  
System.out.println(" "+prime3(n));  
break;**

**default:  
System.out.println("Enter Valid  
options");  
break;  
}  
}while(true);  
}  
}  
Output:  
1. no para no return  
2. no para with return  
3.with para no return  
4.with parameter with return  
1**

**enter the value of number:  
5  
number is prime  
1. no para no return  
2. no para with return  
3.with para no return  
4.with parameter with return  
37. array max  
import java.util.\*;  
public class Main  
{  
private static int[] numbers = {3, 5, 7, 2, 8, -1,  
4, 10, 12};  
public static int findMax() {**

**int max = numbers[0];  
for (int i = 1; i < numbers.length; i++) {  
if (numbers[i] > max) {  
max = numbers[i];  
}  
}  
return max;  
}  
public static void findMax(int[] arr) {  
int max = arr[0];  
for (int i = 1; i < arr.length; i++) {  
if (arr[i] > max) {  
max = arr[i];  
}**

**}  
System.out.println("The maximum value in  
the array is: " + max);  
}  
public static void main(String[] args) {  
int ch,n;  
do{  
Scanner sc = new Scanner(System.in);  
System.out.println("1.No para No  
return\n2.With para No return\n3.No para With  
return\n4.With para With return\n5.Exit");  
ch=sc.nextInt();  
switch(ch) {  
case 1:  
int maxValue = findMax();**

**System.out.println("The maximum  
value in the array is: " + maxValue);  
break;  
case 2:  
int[] numbers = {1, 2, 3, 4, 5, 6, 7, 8, 9,  
10};  
findMax(numbers);  
break;  
case 5:  
System.exit(1);  
break;  
default:  
System.out.println("Enter Valid  
options");  
break;  
}**

**}while(true);  
}  
}  
Output:  
1.No para No return  
2.With para No return  
3.No para With return  
4.With para With return  
5.Exit  
1  
The maximum value in the array is: 12  
1.No para No return  
2.With para No return  
3.No para With return**

**4.With para With return  
5.Exit  
38.four different in one pargram.  
import java.util.\*;  
class Multi  
{  
static void pattern()  
{  
int n;  
Scanner sc =new Scanner (System.in);  
System.out.println("Enter value of n");  
n=sc.nextInt();  
for(int i=1;i<=n;i++)  
{**

**for(int j=1;j<=i;j++)  
{  
System.out.print(""+j);  
}  
System.out.println();  
}  
}  
static void prime(int n)  
{  
int i,flag=0;  
for(i=2;i<=(n/2);i++)  
{  
if(n%i==0)**

**{  
flag=1;  
break;  
}  
}  
if(flag==0)  
System.out.println("No is prime");  
else  
System.out.println("No is not prime");  
}  
static String pal()  
{  
int n,i,sum=0,n1,p;  
Scanner sc =new Scanner (System.in);**

**System.out.println("Enter value of n");  
n=sc.nextInt();  
p=n;  
while(p>0)  
{  
n1=p%10;  
p=p/10;  
sum=(sum\*10)+n1;  
}  
if(sum==n)  
return "No is pal";  
else  
return "No is not pal";  
}**

**static int power(int x,int n)  
{  
int f1=1,i;  
for(i=1;i<=n;i++)  
{  
f1=f1\*x;  
}  
return (f1);  
}  
public static void main(String[] args)  
{  
int n,x;**

**Scanner sc =new Scanner (System.in);  
pattern();  
System.out.println("Enter value of n");  
n=sc.nextInt();  
prime(n);  
String s1=pal();  
System.out.println(""+s1);  
System.out.println("Enter value of n");  
n=sc.nextInt();  
System.out.println("Enter value of x");  
x=sc.nextInt();**

**System.out.println("Power"+power(x,n));  
}  
}  
Output:  
Enter value of n  
3  
1  
12  
123  
Enter value of n  
4  
No is not prime**

**Enter value of n  
5  
No is pal  
Enter value of n  
6  
Enter value of x  
2  
Power64**