**1) Factorial Number**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in); System.out.println("Enter a number"); int n,f1=1; n=sc.nextInt(); int i=n; while(i>1){

f1=f1\*i;

i--;

}

System.out.println(f1);

}

}

**O/P:**

Enter a number

5

120

**2) Multiplication** import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n,mul=1;

System.out.println("Enter a number"); n=sc.nextInt(); while(n>0){

mul=mul\*n;

n--;

}

System.out.println("Multiplication="+mul);

}

}

**O/P:**

Enter a number

10

Multiplication=3628800

**3) Number is Prime or Not**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in); System.out.println("Enter a number"); int n,count=0; n=sc.nextInt(); int i=1; while(i<=n){ if(n%i==0)

count++;

i++;

}

if(count==2)

System.out.println("Prime"); else

System.out.println("Not Prime");

}

}

**O/P:**

Enter a number

7

Prime

**4) Pronic Number**

**I/P: 6**

**O/P: 2\*3 == 6 (pronic) product of two consecutive pair**

**I/P: 45**

**O/P: 9\*5 == 6 (Not pronic)**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in); System.out.println("Enter a number"); int n,flag=0,i; n=sc.nextInt(); i=1;

while(i<=n){

if(n==(i\*(i+1))){

flag=1; break;

}

i++;

} if(flag==1)

System.out.println("Pronic"); else

System.out.println("Not Pronic");

}

}

**O/P:**

Enter a number

21

Not Pronic

**5) perfect Number**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in); System.out.println("Enter a number"); int n,sum=0,i; n=sc.nextInt(); i=1; while(i<n){ if(n%i==0){

sum+=i;

} i++;

}

if(n==sum)

System.out.println("Perfect"); else

System.out.println("Not Perfect");

}

}

**O/P:**

Enter a number

12

Not Perfect

**6.1) Fibonacci Series i/p: 10**

**O/P: 0 1 1 2 3 5 8 13 21 34**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in); System.out.println("Enter the value of n"); int n,f1=0,f2=1,f3=0; n=sc.nextInt(); if(n<=0){

System.out.print("0");

}

else{

System.out.print(f1+" "+f2+" "); while(n>2){

f3=f1+f2;

System.out.print(f3+" "); f1=f2; f2=f3; n--;

}

}

}

}

**O/P:**

Enter the value of n

20

0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181

**6.2) Fibonacci Series i/p: 10**

**O/P: 0 1 1 2 3 5 8**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc = new Scanner(System.in); System.out.println("Enter the value of n"); int n = sc.nextInt(); int f1 = 0, f2 = 1, f3;

if (n <= 0) {

System.out.print(f1);

} else {

System.out.print(f1 + " "+f2 + " ");

f3 = f1 + f2; while (f3 <= n) {

System.out.print(f3 + " "); f1 = f2; f2 = f3; f3 = f1 + f2;

}

}

}

}

O/P:

Enter the value of n

10

0 1 1 2 3 5 8

**7) Sum of digit(765=7+6+5=18)** import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in); System.out.println("Enter the value of n"); int n,sum=0,n1; n=sc.nextInt(); while(n>0){ n1=n%10; n=n/10; sum=sum+n1;

}

System.out.print("sum= "+sum);

}

}

**O/P:**

Enter the value of n 765 sum= 18

**8) Reverse Number**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

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

int n,sum=0,n1; n=sc.nextInt(); while(n>0){ n1=n%10; n=n/10; sum=(sum\*10)+n1;

}

System.out.print("Reverse Number= "+sum);

}

}

**O/P:**

Enter the value of n

789

Reverse Number= 987

**9) Palindrome or Not** import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in); System.out.println("Enter the value of n"); int n,sum=0,n1; n=sc.nextInt(); int temp=n; while(n>0){ n1=n%10; n=n/10; sum=(sum\*10)+n1;

}

if(temp==sum){

System.out.println("Palindrome");

}

else{

System.out.println("Not Palindrome");

}

}

}

**O/P:**

Enter the value of n

131

Palindrome

**10) Armstrong or Not**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in); System.out.println("Enter the value of n"); int n,sum=0,rem; n=sc.nextInt(); int temp=n; while(n>0){

rem=n%10; sum=sum+(rem\*rem\*rem); n=n/10;

}

if(temp==sum){

System.out.println("Armstrong");

}

else{

System.out.println("Not Armstrong");

}

}

}

**O/P:**

Enter the value of n

153

Armstrong

**11) Sum of first & last digit digit**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n,sum=0,last\_digit,rem,fisrt\_digit; System.out.println("Enter a number"); n=sc.nextInt(); last\_digit=n%10; while(n>0){

rem=n%10; sum=(sum\*10)+rem; n/=10;

}

fisrt\_digit=sum%10;

System.out.println("Sum of first & last Digit="+(fisrt\_digit+last\_digit));

}

}

**O/P:**

Enter a number

123456789

Sum of first & last Digit=10

**12) Count Number of digits** import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in); System.out.println("Enter the value of n"); int n,count=0,rem; n=sc.nextInt(); int temp=n; while(n>0){ count++; n=n/10;

}

System.out.println("Count="+count);

}

}

**O/P:**

Enter the value of n

659876

Count=6

**13) Count total number of even digit, Odd digit & Zero digit.**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in); System.out.println("Enter the value of n"); int n,n1,even=0,odd=0,zero=0; n=sc.nextInt(); while(n>0){ n1=n%10; n=n/10; if(n1==0){

zero++;

}

else if(n1%2==0){

even++;

}

else{

odd++;

}

}

System.out.println("Zero="+zero);

System.out.println("Even="+even);

System.out.println("Odd="+odd);

}

}

**O/P:**

Enter the value of n

123200

Zero=2

Even=2

Odd=2

**14) Count the total number of prime digits in a given number.** import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n,count=0,digit;

System.out.println("Enter a number"); n=sc.nextInt(); while(n>0){

digit=n%10; if(digit==1||digit==2||digit==3||digit==5||digit==7)

count++;

n/=10;

}

System.out.println("Total Count of prime digit="+count);

}

}

**O/P:**

Enter a number

1234567

Total Count of prime digit=5

**15) Krishnmurthy/Strong Number or not**

import java.util.\*;

public class Main

{

public static void main(String[] args) {

Scanner sc = new Scanner(System.in); System.out.println("Enter a number"); int n,temp,digit,fact=0,sum=0; n = sc.nextInt(); temp=n; while(n>0){ digit=n%10; n/=10; fact=1; while(digit>1){

fact=fact\*digit; digit--;

}

sum=sum+fact;

}

if(temp==sum){

System.out.println("Strong Number");

}

else{

System.out.println("Not Strong Number");

}

}

}

**O/P:**

Enter a number

23

Not Strong Number

**16) I/P:1234**

**O/P:sum=1\*2+2\*3+3\*4**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc = new Scanner(System.in); System.out.println("Enter a number"); int n,temp,digit1,digit2,sum=0; n = sc.nextInt(); while(n>0){ digit1=n%10; n/=10;

digit2=n%10; sum=sum+(digit1\*digit2);

}

System.out.println("Sum="+sum);

}

}

**O/P:**

Enter a number

1234

Sum=20

**17) I/P:123**

**O/P: OneTwoThree**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n,digit,sum=0;

System.out.println("Enter a number"); n=sc.nextInt(); while(n>0){ digit=n%10; n/=10; sum=(sum\*10)+digit;

}

n=sum;

while(n>0){ digit=n%10; n/=10; switch(digit){ case 0:System.out.print("Zero"); break;

case 1:System.out.print("One"); break;

case 2:System.out.print("Two"); break;

case 3:System.out.print("Three"); break;

case 4:System.out.print("Four"); break;

case 5:System.out.print("Five"); break; case 6:System.out.print("Six"); break;

case 7:System.out.print("Seven"); break;

case 8:System.out.print("Eight"); break;

case 9:System.out.print("Nine");

break;

}

}

}

}

**O/P:**

Enter a number

12340765

OneTwoThreeFourZeroSevenSixFive

**18) Disarium Number or Not**

**I/P: 135**

**1^1+3^2+5^3==135 (Disarium Number)**

**(Not Disarium Number)**

import java.util.\*; public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in); System.out.println("Enter a number"); int n, mul, sum = 0, digit, temp, count = 0, t; n = sc.nextInt(); t = n; while (n > 0) { count++; n /= 10;

}

temp = t; while (t > 0) { digit = t % 10; t /= 10; mul = 1; for (int i = 1; i <= count; i++) {

mul \*= digit;

}

count--;

sum += mul;

}

if (temp == sum)

System.out.println("Disarium Number"); else {

System.out.println("Not Disarium Number");

}

}

}

**O/P:**

Enter a number

135

Disarium Number

**19) Magic Number or Not**

**(If sum of digit==1 Magic Otherwise Not) I/P: 55=5+5=10=1+0=1(Magic) I/P: 75=7+5=12=1+2=3 (Not Magic)**

import java.util.\*; public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in); System.out.println("Enter a number"); int n, sum = 0, digit, temp; n = sc.nextInt(); temp = n;

while (temp > 0) { digit = temp % 10; temp /= 10; sum += digit;

}

while (sum > 9) { temp = sum; sum = 0; while (temp > 0) { digit = temp % 10; temp /= 10; sum += digit;

}

}

if (sum == 1) {

System.out.println("Magic Number");

} else {

System.out.println("Not Magic Number");

}

}

}

**O/P:**

Enter a number

55

Magic Number

**20) Twins Prime or Not Twins Prime**

**(If firstNumber & secondNumber difference is 2 and firstNumber & secondNumber is prime than Twins Prime otherwise Not Twins Prime)** import java.util.\*; public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in); System.out.println("Enter two numbers"); int n1,n2,diff,temp,count1=0,count2=0,i,j; n1 = sc.nextInt(); n2 = sc.nextInt(); diff=n1-n2; i=1; while(i<=n1){ if(n1%i==0){

count1++;

} i++;

} j=1; while(j<=n2){ if(n2%j==0){

count2++;

} j++;

}

if(diff==-2&&count1==2&&count2==2){ System.out.println("Twins Prime");

}

else{

System.out.println("Not Twins Prime");

}

}

}

**O/P:**

Enter two numbers

3

5

Twins Prime

**21) Prime Palindrome** import java.util.\*; public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in); System.out.println("Enter a number:"); int n,temp,count=0,rev= 0,digit; n = sc.nextInt(); temp = n;

int i = 1; while (i <= n) { if (n % i == 0) { count++;

} i++;

}

while (n != 0) {

digit = n % 10; rev = rev \* 10 + digit; n /= 10;

}

if (count == 2 && temp == rev) {

System.out.println("Prime Palindrome.");

} else {

System.out.println("Not Prime Palindrome.");

}

}

}

**O/P:**

Enter a number:

1111

Prime Palindrome.

**22) Xylem or Phloem number**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n,firstLast=0,num,middleSum=0; System.out.println("Enter a number"); n=sc.nextInt(); num=n;

while(n>0){

if(num==n || n<10){ //num==n =>Last Digit n<10 => First Digit

firstLast+=n%10;

}

else{

middleSum+=n%10;

}

n/=10;

}

if(firstLast==middleSum)

System.out.println("Xylem Number"); else{

System.out.println("Phloem Number");

}

}

}

**O/P:**

Enter a number

12315

Xylem Number

**23) Upto n print all armstrong numbers.**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int range,sum=0,rem,i,n;

System.out.println("Enter the range"); range=sc.nextInt();

for(i=1;i<=range;i++){ sum=0;

n=i; while(n>0){

rem=n%10; sum=sum+rem\*rem\*rem; n/=10;

}

if(i==sum)

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

}

}

}

**O/P:**

Enter the range

100000

1 153 370 371 407

**24) upto n print all Palindrome Numbers.** import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int range,i,n,rem,sum;

System.out.println("Enter the range"); range=sc.nextInt(); for(i=1;i<=range;i++){ sum=0;

n=i; while(n>0){

rem=n%10; sum=(sum\*10)+rem; n/=10;

}

if(i==sum){

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

}

}

}

}

**O/P:**

Enter the range

1000

1 2 3 4 5 6 7 8 9 11 22 33 44 55 66 77 88 99 101 111 121 131 141 151 161 171 181 191 202

212 222 232 242 252 262 272 282 292 303 313 323 333 343 353 363 373 383 393 404 414 424

434 444 454 464 474 484 494 505 515 525 535 545 555 565 575 585 595 606 616 626 636 646

656 666 676 686 696 707 717 727 737 747 757 767 777 787 797 808 818 828 838 848 858 868

878 888 898 909 919 929 939 949 959 969 979 989 999

**25) upto n print all Krishnamurti/Strong Numbers**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int range,i,n,digit,sum=0,mul; System.out.println("Enter the range"); range=sc.nextInt(); for(i=1;i<=range;i++){ sum=0; n=i; while(n>0){ digit=n%10; n/=10; mul=1;

while(digit>0){

mul=mul\*digit;

digit--;

}

sum+=mul;

//System.out.print(sum+" ");

}

if(i==sum){

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

}

}

}

}

**O/P:**

Enter the range

100000

1 2 145 40585

**26) upto to n print all Disarium numbers**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int range,i,n,digit,sum=0,mul,count=0,temp; System.out.println("Enter the range"); range=sc.nextInt(); for(i=1;i<=range;i++){

sum=0; n=temp=i; while(n>0){ count++; n/=10;

}

while(temp>0)

{

digit=temp%10; temp/=10; mul=1; for (int j = 1; j <= count; j++) {

mul \*= digit;

}

count--;

sum+=mul;

}

if(i==sum){

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

}

}

}

}

**O/P:**

Enter the range

1000

1 2 3 4 5 6 7 8 9 89 135 175 518 598

**27) Upto n print all Twins Prime numbers**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int range,count1,count2,n,i,j,k; System.out.println("Enter the value of range"); range=sc.nextInt(); for(i=1;i<=range;i++){

count1=0; count2=0; j=1; while(j<=i){ if(i%j==0) count1++;

j++;

}

n=i+2; k=1; while(k<=n){ if(n%k==0)

count2++;

k++;

}

if(count1==2&&count2==2){

System.out.println(i+" "+n);

}

}

}

}

**O/P:**

Enter the value of range

100

3 5

5 7

11 13

17 19

29 31

41 43

59 61

71 73

**28) Upto n print all Prime Palindrome numbers**

import java.util.\*; public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in); System.out.println("Enter a number:"); int range,n,temp,count,rev,digit,i; range = sc.nextInt(); for (i=1;i<=range ;i++){

int j = 1; count=0; rev=0; while (j <= i) { if (i % j == 0) {

count++;

}

j++;

}

temp = i; while (temp != 0) {

digit = temp % 10; rev = rev \* 10 + digit; temp /= 10;

}

if (count == 2 && i == rev) {

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

}

}

}

}

**O/P:**

Enter a number:

1000

2 3 5 7 11 101 131 151 181 191 313 353 373 383 727 757 787 797 919 929

**29) Upto n print all Magic Numbers**

import java.util.\*; public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in); System.out.println("Enter a number"); int range,n, sum, digit, temp,i; range = sc.nextInt(); for(i=1;i<=range;i++){ sum = 0; temp = i; while (temp > 0) {

digit = temp % 10; temp /= 10; sum += digit;

}

while (sum > 9) {

temp = sum; sum = 0; while (temp > 0) {

digit = temp % 10; temp /= 10; sum += digit;

}

}

if (sum == 1) {

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

}

}

}

}

**O/P:**

Enter a number

1000

1 10 19 28 37 46 55 64 73 82 91 100 109 118 127 136 145 154 163 172 181 190 199 208 217

226 235 244 253 262 271 280 289 298 307 316 325 334 343 352 361 370 379 388 397 406 415

424 433 442 451 460 469 478 487 496 505 514 523 532 541 550 559 568 577 586 595 604 613

622 631 640 649 658 667 676 685 694 703 712 721 730 739 748 757 766 775 784 793 802 811

820 829 838 847 856 865 874 883 892 901 910 919 928 937 946 955 964 973 982 991 1000

**30) Upto n print all xylem & Phloem numbers** import java.util.\*; public class Main

{

public static void main(String[] args){ int range, sumE, sumM, n,i; Scanner sc= new Scanner (System.in); System.out.println("Enter the range:"); range = sc.nextInt(); for(i=110;i<=range;i++){ sumE = 0; sumM = 0; n = i; while(n > 0){

if(n == i || n < 10)

sumE = sumE + n % 10;

else

sumM = sumM + n % 10;

n = n / 10;

}

if(sumE == sumM)

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

}

}

}

**O/P:**

Enter the range:

1000

110 121 132 143 154 165 176 187 198 220 231 242 253 264 275 286 297 330 341 352 363 374

385 396 440 451 462 473 484 495 550 561 572 583 594 660 671 682 693 770 781 792 880 891 990

**31) Accept n from user & print those number which does not contain any zero digit**

**I/P:n=1000**

**O/P:1 2 3 4 5 6 7 8 9 11 ... 21 111 ..121** import java.util.\*; public class Main { public static void main(String[] args) {

Scanner sc = new Scanner(System.in); System.out.println("Enter a number"); int range,n, flag, digit, temp,i; range = sc.nextInt(); for(i=1;i<=range;i++){ flag=0; n=i; while(n>0){ digit=n%10; n/=10; if(digit==0){ flag=1; break;

} }

if(flag!=1)

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

}

}

}

**O/P:**

Enter a number

100

1 2 3 4 5 6 7 8 9 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 31 32 33 34 35 36 37

38 39 41 42 43 44 45 46 47 48 49 51 52 53 54 55 56 57 58 59 61 62 63 64 65 66 67 68 69 71

72 73 74 75 76 77 78 79 81 82 83 84 85 86 87 88 89 91 92 93 94 95 96 97 98 99

**32) Accept 1 no from user displays its digits in ascending order i/p 2413 o/p 1234**

import java.util.\*; public class Main {

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n,n0,n1,n2,n3,n4,n5,n6,n7,n8,n9; System.out.println("Enter a number"); n=sc.nextInt();//4132

n0=n1=n2=n3=n4=n5=n6=n7=n8=n9=n; while(n0>0){ int digit=n0%10; n0/=10;

if(digit==0)

System.out.print(digit);

}

while(n1>0){ int digit=n1%10; n1/=10;

if(digit==1)

System.out.print(digit);

}

while(n2>0){ int digit=n2%10; n2/=10;

if(digit==2)

System.out.print(digit);

}

while(n3>0){ int digit=n3%10; n3/=10;

if(digit==3)

System.out.print(digit);

}

while(n3>0){ int digit=n3%10; n3/=10;

if(digit==3)

System.out.print(digit);

}

while(n4>0){ int digit=n4%10; n4/=10;

if(digit==4)

System.out.print(digit);

}

while(n5>0){

int digit=n5%10; n5/=10;

if(digit==5)

System.out.print(digit);

}

while(n6>0){ int digit=n6%10; n6/=10;

if(digit==6)

System.out.print(digit);

}

while(n7>0){ int digit=n7%10; n7/=10;

if(digit==7)

System.out.print(digit);

}

while(n8>0){ int digit=n8%10; n8/=10;

if(digit==8)

System.out.print(digit);

}

while(n9>0){ int digit=n9%10; n9/=10;

if(digit==9)

System.out.print(digit);

}

}

}

**O/P:**

Enter a number

2413

1234

**33) decimal to binary**

**I/P: 11**

**O/P: 1011**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

int n,digit,p=1,sum=0;

System.out.println("Enter the value of n"); n=sc.nextInt(); while(n>0){ digit=n%2; n=n/2; sum=sum+(digit\*p); p=p\*10;

}

System.out.println("Binary number="+sum);

}

}

**O/P:**

Enter the value of n

12

Binary number=1100

**34) binary to decimal**

**I/P: 111**

**O/P: 7**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n,digit,p=1,sum=0;

System.out.println("Enter Binary number"); n=sc.nextInt(); while(n>0){ digit=n%10; n=n/10; sum=sum+(digit\*p); p=p\*2;

}

System.out.println("Decimal number="+sum);

}

}

**O/P:**

Enter Binary number

111

Decimal number=7

**35) decimal to octal**

**I/P: 10**

**O/P: 12**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n,digit,p=1,sum=0;

System.out.println("Enter the value of n"); n=sc.nextInt(); while(n>0){ digit=n%8; n=n/8; sum=sum+(digit\*p); p=p\*10;

}

System.out.println("Octal number="+sum);

}

}

**O/P:**

Enter the value of n

10

Octal number=12

**36) octal to decimal**

**I/P: 12**

**O/P: 10**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n,digit,p=1,sum=0;

System.out.println("Enter the value of n"); n=sc.nextInt(); while(n>0){ digit=n%10; n=n/10; sum=sum+(digit\*p); p=p\*8;

}

System.out.println("Octal number="+sum);

}

}

**O/P:**

Enter the value of n

12

Octal number=10

**37) use of continue keyword**

**I/P: GCD & LCM**

**12 48**

**O/P: GCD=12 lcm=48**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n,a,b,gcd=0,lcm,i;

System.out.println("Enter the value of a & b"); a=sc.nextInt(); b=sc.nextInt(); if(a<b) n=a;

else n=b;

for(i=1;i<=n;i++){ if(a%i!=0){ continue;

} if(b%i!=0){ continue;

}

gcd=i;

}

lcm=(a\*b)/gcd;

System.out.println("GCD="+gcd+" "+"LCM="+lcm);

}

}

**O/P:**

Enter the value of a & b

12

48

GCD=12 LCM=48

**38) ATM**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int

cPin=4321,count=1,ePin,accountType,option,w\_amt,d\_amt,oldPin,newPin,limit;

double interest,balance=200000; while(count<=3){

System.out.println("Enter your pin number"); ePin=sc.nextInt(); if(cPin==ePin){

System.out.println("Choose Account Type \n1.Current\n2.Saving"); accountType=sc.nextInt(); switch(accountType){

case 1: System.out.println("Select option\n1.Show

balance\n2.Withdraw\n3.Deposite\n4.Change pin\n5.Interest calculate");

option=sc.nextInt(); switch(option){

case 1:System.out.println("Balance:"+balance);

break;

case 2:limit=20000;

System.out.println("Enter amount"); w\_amt=sc.nextInt(); if(w\_amt>=100 && w\_amt%100==00){ if(w\_amt<limit){

if(w\_amt<=balance){

balance=balance-w\_amt;

System.out.println("Remaining balance="+balance);

} else{

System.out.println("Insufficient Balance");

}

}

else{

System.out.println("Limited Balance");

}

}

else{

System.out.println("Please, Enter valid amount");

}

break;

case 3:System.out.println("Enter amount"); d\_amt=sc.nextInt(); if(d\_amt>0){

balance=balance+d\_amt;

System.out.println("Balance="+balance);

}

else{

System.out.println("Please, Enter valid amount");

}

break;

case 4:System.out.println("Enter your old pin");

oldPin=sc.nextInt(); if(oldPin==cPin){

System.out.println("Enter your new pin"); newPin=sc.nextInt(); int temp=newPin,digit=0; while(newPin>0){ digit++; newPin/=10;

} if(digit==4){

cPin=temp;

System.out.println("Pin change successfully");

}

else{

System.out.println("Invalid pin");

}

}

else{

System.out.println("Invalid pin");

}

break;

case 5: interest=balance\*0.02;

System.out.println("Total Interest="+interest); break;

default: System.out.println("Invalid Choose");

break;

}

break; case 2: System.out.println("Select option\n1.Show

balance\n2.Withdraw\n3.Deposite\n4.Change pin\n5.Interest calculate");

option=sc.nextInt(); switch(option){

case 1:System.out.println("Balance:"+balance);

break;

case 2:System.out.println("Enter amount"); w\_amt=sc.nextInt(); if(w\_amt>=100 && w\_amt%100==00){

if(w\_amt<=balance){

balance=balance-w\_amt;

System.out.println("Remaining balance="+balance);

}

else{

System.out.println("Insufficient Balance");

}

}

else{

System.out.println("Please, Enter valid amount");

}

break;

case 3:System.out.println("Enter amount");

d\_amt=sc.nextInt(); if(d\_amt>0){

balance=balance+d\_amt;

System.out.println("Balance="+balance);

}

else{

System.out.println("Please, Enter valid amount");

}

break;

case 4:System.out.println("Enter your old pin");

oldPin=sc.nextInt(); if(oldPin==cPin){

System.out.println("Enter your new pin"); newPin=sc.nextInt(); int temp=newPin,digit=0; while(newPin>0){ digit++; newPin/=10;

} if(digit==4){

cPin=temp;

System.out.println("Pin change successfully");

}

else{

System.out.println("Invalid pin");

}

}

else{

System.out.println("Invalid pin");

}

break;

case 5: interest=balance\*0.04;

System.out.println("Total Interest="+interest); break;

default: System.out.println("Invalid Choose");

break;

}

break;

default: System.out.println("Invalid Choose");

break;

}

}

else{

System.out.println("Invalid Pin"); if(count==3)

System.out.println("Your card is blocked"); count++;

}

}

}

}