1.Take values of length and breadth and check if it is a rectangle or a square

**import** java.util.Scanner;

**public** **class** Square\_or\_Rectangle\_check {

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

// **TODO** Auto-generated method stub

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

System.***out***.println("Enter the length");

**int** length=sc.nextInt();

System.***out***.println("Enter the Breadth");

**int** Breadth=sc.nextInt();

**if**(length==Breadth)

{

**int** Squarearea=4\*length;

System.***out***.println("Square area: "+Squarearea);

System.***out***.println("Its a square");

}

**else**

{

**int** Rectanglearea=length\*Breadth;

System.***out***.println("Rectangle area: "+Rectanglearea);

System.***out***.println("Its a rectangle");

}

}

}

2. Find largest between 4 numbers

**public** **class** Largest\_of\_4\_numbers {

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

// **TODO** Auto-generated method stub

System.***out***.println("Enter the 4 numbers: ");

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

**int** a = sc.nextInt();

**int** b=sc.nextInt();

**int** c= sc.nextInt();

**int** d=sc.nextInt();

**int** max=a;

**if**(b>max)

{

max=b;

}

**if**(c>max)

{

max=c;

}

**if**(d>max)

{

max=d;

}

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

}

}

3. Check if a year is leap or not

**public** **class** Leap\_year\_check {

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

// **TODO** Auto-generated method stub

System.***out***.println("Enter the year: ");

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

**int** year = sc.nextInt();

**if**((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0))

{

System.***out***.println("Its a leap year");

}

**else**

{

System.***out***.println("Its not a leap year");

}

}

}

4. Check the grading System

**public** **class** GradeSystem\_for\_Maths {

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

// **TODO** Auto-generated method stub

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

System.***out***.print("Enter total marks (0–100): ");

**int** total = sc.nextInt();

System.***out***.print("Enter math marks (0–100): ");

**int** maths = sc.nextInt();

**if** (total < 20) {

System.***out***.println("Result: FAIL");

} **else** **if** (total >= 20 && total < 40 && maths < 20) {

System.***out***.println("Grade: D");

} **else** **if** (total >= 40 && total < 60 && maths > 30) {

System.***out***.println("Grade: C");

} **else** **if** (total >= 60 && total < 80 && maths > 60) {

System.***out***.println("Grade: B");

} **else** **if** (total >= 80 && total <= 100 && maths > 80) {

System.***out***.println("Grade: A");

} **else** {

System.***out***.println("No grade criteria matched.");

}

}

}

5. Calculate the factorial of a 9

**public** **class** Factorial {

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

// **TODO** Auto-generated method stub

System.***out***.println("Enter the factorial digit: ");

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

**int** num=sc.nextInt();

**int** fact=1;

**for**(**int** i=2;i<=num;i++)

{

fact=fact\*i;

}

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

}

}

6. Count the number of digits in an integer

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

// **TODO** Auto-generated method stub

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

System.***out***.print("Enter an integer: ");

**int** num = scanner.nextInt();

**int** count = 0;

**if** (num == 0) {

count = 1; // Special case: 0 has 1 digit

} **else** {

**while** (num > 0) {

num =num/ 10;

count++;

}

}System.***out***.println("Number of digits: " + count);

}

7. Print the sum of even numbers between 1 and 50.

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

// **TODO** Auto-generated method stub

System.***out***.println("Enter the n:");

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

**int** n=sc.nextInt();

**int** sum=0;

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

{

**if**(i%2==0)

{

sum=sum+i;

}

}

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

}

8. Print a menu-driven program for calculator operations (add, subtract, multiply, divide)

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

// **TODO** Auto-generated method stub

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

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

**int** choice = sc.nextInt();

**float** sum=0;

**if**(choice>=1&&choice<=4)

{

System.***out***.println("1. Add the numbers");

System.***out***.println("2. Subtract the numbers");

System.***out***.println("3. Multiply the numbers");

System.***out***.println("4. Divide the numbers");

System.***out***.println("Enter the first number: ");

**int** num1=sc.nextInt();

System.***out***.println("Enter the second number: ");

**int** num2=sc.nextInt();

**switch**(choice)

{

**case** 1: sum=num1+num2;

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

**case** 2: sum=num1-num2;

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

**case** 3: sum=num1\*num2;

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

**case** 4: sum=num1/num2;

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

}

}**else**

{

System.***out***.println("Incorrect option");

}

}

9. Display the first 10 odd numbers.

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

System.***out***.println("Enter the n: ");

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

**int** num=sc.nextInt();

**for**(**int** i=1;i<=num;i++)

{

**if**(i%2!=0)

{

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

}

}

}

10. Print the multiplication table of a 29 using while loop.

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

// **TODO** Auto-generated method stub

System.***out***.println("Enter the multiplication number: ");

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

**int** n=sc.nextInt();

**int** a=n;

**int** i=1;

**while**(i<=10)

{

**int** b=a\*i;

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

i++;

}

}

11. Check if a number is positive or negative.

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

// **TODO** Auto-generated method stub

System.***out***.println("Enter the number: ");

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

**int** n=sc.nextInt();

**if**(n>0)

{

System.***out***.println("positive number");

}

**else**

**if**(n<0)

{

System.***out***.println("negative number");

}

**else**

{

System.***out***.println("0 number");

}

}

12. WAP in Java to calculate Simple Intrest

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

//si=(principal \* rate \* time) / 100

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

System.***out***.println("Enter the Principal: ");

**double** p=sc.nextDouble();

System.***out***.println("Enter rate of interest: ");

**double** r=sc.nextDouble();

System.***out***.println("Enter time: ");

**double** t=sc.nextDouble();

**if**(p!=0)

{

**double** si = (p\*r\*t)/100;

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

}

}

13.Check whether a given number is Armstrong or not

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

System.***out***.println("Enter the number");

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

**int** num = sc.nextInt();

**int** n,i,sum=0;

**int** original=num;

**while**(num!=0)

{

n=num%10;

i=n\*n\*n;

sum=sum+i;

num=num/10;

}

**if**(original==sum)

{

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

}

**else**

{

System.***out***.println("not armstrong");

}

}

14 Patterns

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

// **TODO** Auto-generated method stub

**int** rows=5;

**for**(**int** i=1;i<=5;i++)

{

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

{

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

}

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

}

}

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

// **TODO** Auto-generated method stub

**int** rows=5;

**for**(**int** i=1;i<=5;i++)

{

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

{

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

}

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

}

}

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

// **TODO** Auto-generated method stub

**int** rows=5;

**for**(**int** i=1;i<=5;i++)

{

**int** k=1;

**for**(**int** j=rows;j>=i;j--)

{

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

k++;

}

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

}

}

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

// **TODO** Auto-generated method stub

**int** rows=5;

**for**(**int** i=1;i<=5;i++)

{

**for** (**char** ch = 'A'; ch < 'A' + i; ch++) {

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

}

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

}

}