1. import java.util.scanner;

     public class factorial{

       public static void main (string[] args){

       Scanner sc = new Scanner(System.in);  
      
       system.out.println("input the number: ");  
         
       double n = input.nextdouble();

       double a = 1;

       for (i=1;i<=n;i++){

           a \*= i;

        }

        system.out.println("factorial:"+a);

}}

2.  import java.util.scanner;

     public class big\_number{

       public static void main (string[] args){

       Scanner sc = new Scanner(System.in);  
      
       system.out.println("input the 1st number: ");  
         
       double a = input.nextdouble();

       system.out.println("input the 2nd number: ");  
         
       double b = input.nextdouble();

       system.out.println("input the 3rd number: ");  
         
       double c = input.nextdouble();

       double d = a;

       if(b > d){

         d = b;}

       if (c > d){

          d = c;}

       system.out.println("the greatest: "+d);

      }}

3. import java.util.scanner;

     public class diamond{

       public static void main (string[] args){

       Scanner sc = new Scanner(System.in);  
      
       system.out.println("Input number of rows (half of the diamond): ");  
         
       double a = input.nextdouble();

       for (int i = 1;i <= a; i++){

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

            system.out.print("\*");}

          system.out.println();}

       for (int i = a - 1;i >= 1; i--){

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

            system.out.print("\*");}

          system.out.println();}

 }}

4.  import java.util.scanner;

     import java.util.random;

     public class guessing{

       public static void main (string[] args){

       int a = rand.nextint(100);

       Scanner sc = new Scanner(System.in);  
      
       system.out.println("guess my number game");

       int count = 0;

       while(a == b){

          system.out.println("enter the guess between 1 to 100:");

          int b = input.nextint();

          count ++;

          if (a == b){

                system.out.println("correct! you got it in "+ count +"guesses");}

           else if (a < b){

               system.out.println("too high! try again");}

          else {

               system.out.println("too low! try again");}

}}}

5.   import java.util.scanner;

     public class dowhile{

       public static void main (string[] args){

           Scanner sc = new Scanner(System.in);  
      
         do{

           system.out.println("enter the first number:");

           int a = input.nextint();

           system.out.println("enter the second number:");

           int b = input.nextint();

           int c = a + b;

           system.out.println("sum of numbers:"+c);

           system.out.println("do you want to continue y/n:")

           char d = input.nextchar();

         } while (d == 'y');

}}

6.   1. 1

          3

          5

          7

          9

for loop will run until i equal to 10 . at the time, if condition will check the number i is divided by 2 or not. if i is divided by 2 ,it will be printed. if it is not , that numbers will be omited. so it is a condition for check a i nuber is odd or not.

      2.

it is the same case ,but if condition is missing. so continue function breaks a output and take the process as to next iteration.

so it didn't print any output.

7.

* when we forget to put a break statement in a case clause of a switch ,it allows to process the next case. it is useless of using switch clause . it will print all the outputs of all cases.

|  |  |
| --- | --- |
| break | continue |
| when we use break case, it comes out from the loop. | but it continue, it will skip that line for that iteration and goes to the next iteration. |
| it will use on both loop and switch case. | in continue, only use in loop conditions,not for switch case. |