

Yotam harsh

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Java

```
public static void main (String[] args) {  
  
    int x = Integer.parseInt(args[0]);  
    for (int i = 1; i <= x; i++) {  
        if (x % i == 0) {  
            System.out.println(i);  
        }  
    }  
}
```

```
String Reverse = "";  
String a= args[0];  
char middle = ' ';  
if (a.length()%2==0) {  
    middle=a.charAt((a.length())/2-1);  
    for (int i = a.length()-1; i >= 0; i--)  
    {  
        Reverse=Reverse+a.charAt(i);  
    }  
}else{  
    middle=a.charAt(((a.length()-1)/2));  
    for (int i = a.length()-1; i >= 0; i--)  
    {  
        Reverse=Reverse+a.charAt(i);  
    }  
}  
System.out.println(Reverse);  
System.out.println("The middle character is "+ middle);
```

```

int n= (int) (Math.random() * 10);
System.out.println(n+ " ");
int n1= (int) (Math.random() * 10);
int temp=n;
boolean flag=true;
while ((temp<=n1)&&(flag)) {
    System.out.print(n1);
    if (temp<=n1) {
        System.out.print(" ");
        temp=n1;
    }else{
        flag=false;
    }
    n1=(int) (Math.random() * 10);
}

```

```

int n = Integer.parseInt(args[0]);
String out= n + " is a perfect number since " + n + " = 1";
int sum=1;
for (int i = 2; i < n; i++) {

    if (n%i==0){
        sum+=i;
        out+=" + " +i;
    }
}
if (sum==n) {
    System.out.println(out);
}
else{
    System.out.println(n + " is not a perfect number");
}

```

```

int n = Integer.parseInt(args[0]);
    for(int i=1;i<=n;i++){
        if(i%2==0){
            System.out.print(" ");
        }

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

            if(j<n){
                System.out.print("* ");
            }
            else System.out.print("*");

        }
        if(i%2==1){
            System.out.print(" ");
        }

        System.out.println();

    }

```

```

boolean girl= false;
boolean boy= false;
int sum=0;
while ((!boy)||(!girl)) {
    double n= (Math.random());
    sum++;
    if (n<=0.5) {
        boy=true;
        System.out.print("b ");
    }else{
        girl=true;
        System.out.print("g ");
    }

}
System.out.println();
System.out.println("You made it... and you now have " + sum + "
children.");

```

```

int T=Integer.parseInt(args[0]);
    int c2=0;
    int c3=0;
    int c4=0;
    double count=0;
    int sum=0;
    for (int i = 0; i < T; i++) {
        boolean girl= false;
        boolean boy= false;
        sum=0;
        while ((!boy)||(!girl)) {
            double n= (Math.random());
            sum++;
            if (n<=0.5) {
                boy=true;

            }else{
                girl=true;
            }
        }
        if (sum==2) {
            c2++;
        }
        if (sum==3) {
            c3++;
        }
        if (sum>=4) {
            c4++;
        }
        count+=sum;
    }
    double avg = count/T;
    System.out.println("Average: " + avg + " children to get at
least one of each gender.");
    System.out.println("Number of families with 2 children: " +
c2);
    System.out.println("Number of families with 3 children: " +
c3);
    System.out.println("Number of families with or more children: "
+ c4);
    int max= Math.max(Math.max(c4, c3), c2);
    if (max==c2||max==0){

        System.out.println("The most common number of children is
2.");
    }else if (max==c3) {

```

```
        System.out.println("The most common number of children is  
3.");  
    }else {  
        System.out.println("The most common number of children is 4  
or more.");  
    }
```

```

int T = Integer.parseInt(args[0]);
int seed = Integer.parseInt(args[1]);
Random generator = new Random(seed);
int c2=0;
int c3=0;
int c4=0;
int count=0;
int sum=0;
for (int i = 0; i < T; i++) {
    boolean girl= false;
    boolean boy= false;
    sum=0;
    while ((!boy)||(!girl)) {
        double n= (int) (generator.nextDouble());
        if (n<=0.5) {
            boy=true;

        }else{
            girl=true;
        }
        sum++;
    }
    if (sum==2) {
        c2++;
        count+=sum;
    }
    if (sum==3) {
        c3++;
        count+=sum;
    }
    if (sum>=4) {
        c4++;
        count+=sum;
    }

}
double avg = (double)(count)/T;
System.out.println("Average: " + avg + " children to get at
least one of each gender.");
System.out.println("Number of families with 2 children: " +
c2);
System.out.println("Number of families with 3 children: " +
c3);
System.out.println("Number of families with or more children: "
+ c4);
int max= Math.max(Math.max(c4, c3), c2);

```

```
        if (max==c2){  
            System.out.println("The most common number of children is  
2.");  
        }else if (max==c3) {  
            System.out.println("The most common number of children is  
3.");  
        }else {  
            System.out.println("The most common number of children is 4  
or more.");  
        }  
    }  
}
```