Using While:
(instead of “Go To”)

Start
Read n
If (n>0) then
    Sum=0
    i=1
    while (i<= n)
        sum= sum+i
        i=i+1
    endwhile
    display sum
else
    display error
endif
stop

Ex: read a number check if it is prime or not

in java, “%” is remainder operator.

Flowchart:
Pseudocode

start
read n
i=2
x=n%i
i=i+1

L1: if (x != and i<n) then
    x=n%i
    i=i+2

while (x != and i<n)
    x=n%i
    i=i+2

if (x>0)
display n is a prime number
else
display n is not a prime number
end if
stop

Java

import cs1.Keyboard;
public class TestPrime {
    public static void main (String[] args) {
        int n,i,x;
        System.out.println ("Enter an integer greater than 2");
n=Keyboard.readInt();
System.out.println("Input no:" +n);
i=2;
x=n%i;
i=i+1;
while (x !=0 && i<n) {
    x=n%i;
i=i+2;
}
if  ( x !=0 )
    System.out.println ("It is a prime number");
else
    System.out.println ("It is not a prime number");


For STATEMENT:

n! = 1.2.3............n
int nfac, i, n;

n! = \{ 1  if n=0
nfac = 1
{n*(n-1)!  if n>0  i=1

while (i<=n) {
    nfac = nfac*i;
i++;
}

initialization  condition  update
for (nfac=1, i=1;  i<=n;  i++)

nfac = nfac*i;  ==//statement

*** for ( initialization ; condition ; update)

//statement

initialization
while (cond) {  //i<=n
    statement     //nfac=nfac*i;
    update       //i++;}

find sum

sum = 0;
for ( sum=0, i=1;  i<=n ;i++)
    sum = sum + i;
i=1;
while (i<=n) {
    sum = sum + i;
i++;
}
QUESTIONS:

1) Design and implement an application that determines and prints the number of even, odd, and zero digits in an integer value read from the user. Also use a sentinel value to see if user wants to continue or not. Also try another version that counts 0 as a number in which user is asked to continue.

2) What will be the output of these or is there a mistake:
   a) int i=3;
      while (i<4)
      {
          System.out.println("hi");
          i--;
      }
   b) if(num==min)
      if(num<sum)
          System.out.println("num equals minimum and also smaller than sum");
      else
          System.out.println("num is not equal to minimum ");

3) Find the mistakes in the following program and (There are 4 mistakes) write its pseudocode:

   public class MileConverter;

   public static void main(String[]args);
   {
       double Kilometer;
       conversionfactor=(1/1,609);
       System.out.println("Please enter the mile value to be converted:");
       Mile=Keyboard.readDouble();
       Kilometer= Mile*conversion factor;
       System.out.println("The answer in kilometers is: Kilometer");
   }

4) Write a program which finds the perfect numbers up to 100

5) Transform the following while loop to a)for, b)do loops:

   int i=20;
   while(i>1)
public class deneme {

    public static void main(String[] args) {
        int num;
        String another="y";
        int lastdigit;
        int zero=0;
        System.out.println("Please enter a number:");
        num=Keyboard.readInt();

        while(another.equalsIgnoreCase("y")) {
            while(num>0) {
                int zeros=0;
                int odds=0;
                int evens=0;

                while(num>0) {

                    i--; 
                    System.out.println(i);
                }
            } 
        }
    }
}
lastdigit=num%10;
num=num/10;

if(zero==lastdigit%2)
{
    if(lastdigit== zero)
        zeros++;
    else
        evens++;
    else
        odds++;
}

System.out.println("The number of zeros in the given number is:"+zeros);
System.out.println("The number of odds in the given number is:"+odds);
System.out.println("The number of evens in the given number is:"+evens);

System.out.println("Enter another number which is (0 to quit):"));
num=Keyboard.readInt();

if(num==0)
    System.out.println("The number of zeros in the given number is 1");
System.out.println("Please enter a number:");
num=Keyboard.readInt();
System.out.println("Enter another (y/n?)");
another=Keyboard.readString();
}

2) a) infinite loop

b) if(num = =min)
{
    if(num < sum)
        System.out.println("num equals minimum and also smaller than sum");
}
else
    System.out.println("num is not equal to minimum ");
3) import cs1.Keyboard;

public class MileConverter;
{
    public static void main(String[] args);
    {
        double Kilometer;
        double mile, conversionfactor;
        conversionfactor=(1/1.609);
        System.out.println("Please enter the mile value to be converted:");
        mile=Keyboard.readDouble();
        Kilometer = mile*conversionfactor;
        System.out.println("The answer in kilometers is:");
        +Kilometer);
    }
}

4) * Write a description of class perfectno here.
   *
   * @author (your name)
   * @version (a version number or a date)
   */
   public class perfectno
   {
       public static void main(String[] args)
       {
           int n;
           int zero=0;
           for(n=2; n<=100 ; n++)
           {
               int a=0;
               for(int div=1; div<n; div++)
               {
                   if(n%div==zero)
                       a=a+div;
```java
if(a == n)
    System.out.println(n + "is a perfect no");
}
}

5)
a) int i=20;
    do
    {
        System.out.println("i");
        i--;
    }
    while(i>=1)

b) for(int i=20; i > 1; i--)
    System.out.println("i");
```