2)

import java.util.\*;

class prod

{

public static char lhs;

public static String[] rhs=new String[10];

public static int noa;

public static int flag;

public static int count=0;

public static void fill()

{

Scanner sc=new Scanner(System.in);

System.out.println("Enter lhs");

lhs=sc.next().charAt(0);

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

noa=sc.nextInt();

if((lhs>='A')&&(lhs<='Z'))

{

System.out.println("Enter alternatives");

for(int i=0;i<noa;i++)

rhs[i]=sc.next();

}

}

public static void displayprod()

{

System.out.print("Production is:"+lhs+"->");

for(int i=0;i<noa-1;i++)

System.out.print(rhs[i]+"/");

System.out.println(rhs[noa-1]);

}

public static int countleft()

{

for(int i=0;i<noa;i++)

{

if(lhs==rhs[i].charAt(0))

{

count++;

}

}

return count;

}

}

public class leftrec1 extends prod

{

public static void main(String args[])

{

leftrec1 p=new leftrec1();

flag=0;

fill();

displayprod();

for(int i=0;i<noa;i++)

{

if(lhs==rhs[i].charAt(0))

{

flag=1;

break;

}

}

if(flag==1)

System.out.println("left recursion exists");

else

System.out.println("left recursion does not exist");

countleft();

System.out.println("No. of rhs containing left-rec are:" + count);

}

}

Output:

