Problem: Bigger is Greater

Given a word , rearrange the letters of  to construct another word  in such a way that  is lexicographically greater than . In case of multiple possible answers, find the lexicographically smallest one among them.

**Input Format**

The first line of input contains , the number of test cases. Each of the next  lines contains .

**Constraints**

* will contain only lower-case English letters and its length will not exceed .

**Output Format**

For each testcase, output a string lexicographically bigger than  in a separate line. In case of multiple possible answers, print the lexicographically smallest one, and if no answer exists, print no answer.

**Sample Input 0**

5

ab

bb

hefg

dhck

dkhc

**Sample Output 0**

ba

no answer

hegf

dhkc

hcdk

**Explanation 0**

* *Test case 1:*   
  There exists only one string greater than ab which can be built by rearranging ab. That is ba.
* *Test case 2:*   
  Not possible to rearrange bb and get a lexicographically greater string.
* *Test case 3:*   
  hegf is the next string lexicographically greater than hefg.
* *Test case 4:*   
  dhkc is the next string lexicographically greater than dhck.
* *Test case 5:*   
  hcdk is the next string lexicographically greater than dkhc.

Solution

/\*Sorts the string in increasing order after a particular character\*/

string sort(string &str, int start)

{for(int i=start; i<str.length(); i++)

{for(int j=start; j<str.length()-1; j++)

{if(str[j]>str[j+1])

{char temp=str[j];

str[j]=str[j+1];

str[j+1]=temp;

}

}

}

return str;

}

/\*Process the string for next permutatoin\*/

string process(string str)

{

for(int i=str.length()-2; i>=0; i--)

{

for(int j=str.length()-1; j>i; j--)

{

if(str[i]<str[j])

{

char temp=str[i];

str[i]=str[j];

str[j]=temp;

sort(str,i+1);

return str;

}

}

}

return str;

}

int main()

{

string str;

int cases;

cin>>cases;

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

{

cin>>str;

(str==process(str) ? cout<<"no answer" :cout<<process(str));

cout<<endl;

}

} `‘ Anshul AgGarwal

Using STL

int main()

{

string str;

int cases;

cin>>cases;

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

{

cin>>str;

if( next\_permutation( str.begin(),str.end() ) )

{ cout<<str; }

else

{ cout<<"no answer"; }

cout<<endl;

}

}

`’Anshul AgGarwal