**The Tweeting Chair**

Dr. van Delden recently discovered the joy of Twitter. He hasn’t yet tried FaceSpace or whatever, but baby steps to coolness! He actually tweeted out a picture of himself at work earlier this week. What a weirdo… Seriously, check it out – his Twitter handle is @vandeldensa. Anyways, so Dr. van Delden wants to figure out who all is in what he calls his “extended network” by looking at other twitter handles in tweets that include his twitter handle directly or indirectly. For example, if @csatcofc tweets something that’s tags @vandeldensa and @somebodyelse. And, then there is a tweet from @somebodyelse that tags @anotherperson, then in total 4 handles (@anotherperson, @csatcofc, @somebodyelse, and @vandeldensa) are in @vandeldensa’s “extended network”. Given a series of Tweets, list the people in @vandeldensa’s “extended network.”

**INPUT:** The first line of input states the number of Tweets to follow. One Tweet per line. There will be at least 1 Tweet and @vandeldensa will appear at least once somewhere in the Tweet(s). Each Tweet starts with the Twitter handle generating the Tweet, and could contain 0 or more Twitter handles after that. Assume all Twitter handles are lowercase and there are no punctuations marks at all in the Tweets. All Twitter handles included on a line are considering to be linked together potentially as part of an extended network.

**OUTPUT:** In alphabetical/alphanumeric order, display the Twitter handles in the “extended network.” One per line.

**Example Input:**

7  
@vandeldensa I love @cofc  
@vandeldensa @cofcadmissions and @cofcstudentlife rock  
@clemson This is a lame twitter handle as is @usc #haha  
@csatcofc We are the best department @cofc  
@ucf We are the Knights where @vandeldensa went to school  
@cofchonors We are a great program #forsure  
@cofcorientation We are working with @cofchonors on a great project

**Example Output:**

@cofc  
@cofcadmissions  
@cofcstudentlife  
@csatcofc  
@ucf  
@vandeldensa