Students at your hometown high school have decided to organize their social network using databases. So far, they have collected information about sixteen students in four grades, 9-12. Here's the schema:   
  
Highschooler ( ID, name, grade )   
English: There is a high school student with unique *ID* and a given *first name* in a certain *grade*.   
  
Friend ( ID1, ID2 )   
English: The student with *ID1* is friends with the student with *ID2*. Friendship is mutual, so if (123, 456) is in the Friend table, so is (456, 123).   
  
Likes ( ID1, ID2 )   
English: The student with *ID1* likes the student with *ID2*. Liking someone is not necessarily mutual, so if (123, 456) is in the Likes table, there is no guarantee that (456, 123) is also present.   
  
For your convenience, here is a graph showing the various connections between the students in our database. 9th graders are blue, 10th graders are green, 11th graders are yellow, and 12th graders are purple. Undirected black edges indicate friendships, and directed red edges indicate that one student likes another student.

