We decided upon using a greedy approach for our approximate solution, where we sort our graph by the number of vertices incident to each edge. Starting with the vertices that have the most edges will of course remove the largest # of edges from our graph, bringing us closer to a vertex cover. This approach works because we want to select the minimum number of vertices incident to each edge.

Our approximate solution's runtime is O(n^2) because in the worst case our graph is complete, so we have to remove up to **n** edges from all **n** vertices.

Our approximate solution is able to pass all tests on gradescope, performing pretty well compared to other groups.

Our approximate solution is able to run all of our tests much faster than our exact solution, but the vertex covers that it creates aren't always correct. It returns an accurate vertex cover on smaller graphs but on larger graphs with more edges, the covers start containing more vertices than the covers from our exact solution.