Question X. (20 points)

Fill in the following code that reads in a spreadsheet about restaurants and updates it. Follow the comments to know what the code should do. The first input of the function will be the name of an Excel file (ending in '.xlsx'), which needs to be sorted by the name of the column in the second input (in ascending order). For the same column, delete the rows whose entries are less than the third input. Then find the Signature Dish (guaranteed to be in column 3) of the top restaurant. Make a new column called 'Average Price' that finds the average price of the dishes located in columns 4 through 6.

The first row is guaranteed to be headers. Any columns not mentioned may be in any order.

Example:

`restaurants.xlsx`

'Restaurant'	'Rating'	'Signature Dish'	'Entree 1'	'Entree 2'	'Entree 3'
'Tech Taco'	1.2	'Tortilla'	6	9	8
'Rays'	5.0	'Calzone'	4	7	4
'Waffle Home'	4.999	'Waffle'	8	6	10

```
>>dish = yelp('restaurants.xlsx','Rating',3)

dish = 'Calzone'
```

`restaurants_sorted.xlsx`

'Restaurant'	'Rating'	'Signature Dish'	'Entree 1'	'Entree 2'	'Entree 3'	'Average Price'
'Rays'	5.0	'Calzone'	4	7	4	5
'Waffle Home'	4.999	'Waffle'	8	6	10	8

```
1  function dish = yelp(filename, category, val)
2  [num, txt, raw] = xlsread(filename);
3  headers = raw(1,:);
4  % find the position of the column stored in the variable category
5  mask = ____________________________________________________;
6  column = raw(:,mask);
7   % sort the column of numbers extracted by the mask
8  [sorted, ind] = ____________________________________________;
9  raw = raw(ind,:);
10 mask2 = sorted < val;
11 % delete the rows that are less than val
12 ____________________________________________________________;
13 % extract the columns that have prices
14 prices = cell2mat(_____________________________________);
15 avg = mean(prices,2);
16 % make a new column where each row is the average of the prices with
17 % header 'Average Price'
18 newcol = ___________________________________________________;
19 % Append your new column to the array
20 raw = ______________________________________________________;
21 % extract the signature dish of the top restaurant ranked by
22 % category
23 dish = ____________________________________________________;
24 % write to file ending with '_sorted.xlsx'
25 ____________________________________________________________;
26 end
```