EGME 2050 Computational Methods
Spring 2022

Lab Week 4

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Submitted

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Problem 1: Section 10.11

```
function winnersList = IcecreamVotes(votes)
    icecreamFlavors = ["Chocolate" "Vanilla" "Strawberry"; "Mint" "Cookie dough"
"Butterscotch"; "Blueberry" "Raspberry" "Coconut"; "Caramel ribbon" "Pecan praline"
"Neopolitan"]

    % Use logical indexing with relational expressions to create a logical array
    voteLogic = votes>=100;
    % Use horzcat to append the winning ice cream flavors and votes
    winnersList = horzcat(icecreamFlavors(voteLogic),votes(voteLogic));
end
```

Problem 2: Section 11.6

```
function [flipFlop, lowerTriangle] = FlipFlopArray(A)
    % flip array A from left to right, then upside down
    flipFlop = flipud(fliplr(A));

    % store the lower triangular portion of flipFlop
    lowerTriangle = tril(flipFlop);
end
```

Problem 3: Section 12.6

```
function sortedRevenue = MaxRevenueSort(numItemsSold)
   itemPrice = [25 15 30; 20 35 50; 20 30 45];

   % Calculate Revenue
   revenue = itemPrice.*numItemsSold;

   %Sort Revenue in descending order
   revenueRow=revenue(:); %flatten revenue
   sortedRevenueRow=sort(revenueRow,'descend'); %sort revenue in decending order
   sortedRevenue=reshape(sortedRevenueRow,3,3)'; %reshape sortedRevenueRow into a 3x3
array

end
```