

# **Homework 6**

CMPSC 465

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**Problem 1:**

I worked with Sahil Kuwadia and Ethan Yeung  
I did not consult without anyone my group member  
I did not consult any non-class materials

**Problem 2:**

**Problem 3:**

We can find the solution to this problem by creating a maximum flow network graph. We can first create a node for every patient ( $p_i$  where  $i \in [1, n]$ ) and every hospital ( $h_j$  where  $j \in [1, k]$ ) in the area. Then, create an edge from every patient to every hospital ( $p_i, h_j$ ), and set the maximum capacity of that edge to 1 if and only if  $p_i$  can get to  $h_j$  within the half hour time limit, else set the capacity to 0. Now