



Stamford University Bangladesh
Department of Computer Science and Engineering
Lab Task on List, Summer 2019
CSI 422: Artificial Intelligence and Expert System Sessional
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Answer all the Questions

1. The number of different ways you can pick r items from a set of n items is denoted by n_{C_r} . [5]
The recursive relation for n_{C_r} is:

$$n_{C_r} = n_{C_{r-1}} + n_{C_r}$$

Now write a recursive procedure which computes the values of n_{C_r} using a two-place predicate.

2. Given a positive integer 'N', write a Prolog procedure to count the number of times a [5]
particular digit occurs in it.

For example, the $N=131583$ and $\text{digit}=3$ the count result will be 2.

Use a three-place predicate.

3. Using Accumulators, write a recursive prolog procedure to find the sum of first n elements of [5]
the given list:

25+28+31+ [Use a 3 place predicate]

4. Write a prolog procedure to find out the last element of a given list. [5]

5. Represent the following graph in your knowledge base. Then write a predicate route/3 which [5]
gives you a list of towns that are visited by starting from a particular town and travelling
down to another.

