## CMSC 23500: Introduction to Databases

Homework 2 Andrew Yang April 23, 2015

## $\mathbf{Q}\mathbf{1}$

 $\begin{array}{ll} \text{A1. } \pi_{pname}(\sigma_{visitsperyear<100}(P)) \\ \text{A2. } \pi_{ssn}(\sigma_{pname=="Yellowstone}(P\bowtie R)) \\ \text{A3. } \pi_{lname}(\sigma_{pop<2000000}(S\bowtie P\bowtie R)) \end{array}$ 

## $\mathbf{Q2}$

B1.  $\pi_{lname}(\sigma_{sname}=="Yesterday"(S\bowtie W\bowtie P))$ B2.  $\pi_{sname}(\sigma_{lname}=="Rogers"\land fname}=="Richard"(S\bowtie W\bowtie P))$ B3.  $\pi_{sname}((\sigma_{iname}=="flute"(R\bowtie I))\bowtie T\bowtie S)$ B4.  $\pi_{lname}(\sigma_{iname}=="guitar"(R\bowtie P))$ B5.  $\pi_{fname,lname}(\sigma_{iname}=="tuba"(W\bowtie P\bowtie T\bowtie R\bowtie I))$