4.1. Find the names of all instructors in the History department.

>> $\pi_{\text{name}} (\sigma_{(\text{dept\_name = 'History'})} (\text{tbl\_instructor}))$;

4.2. Find the instructor ID and department name of all instructors associated with a department with budget of greater than $95,000.

>> $\pi_{\text{id, dept\_name}} (\sigma_{(\text{budget} > 95000)} (\text{tbl\_instructor} \bowtie \text{tbl\_department}))$

4.3. Find the names of all instructors in the Comp. Sci. department together with the course titles of all the courses that the instructors teach.

>> $\pi_{\text{name, title}} (\text{tbl\_instructor} \bowtie \text{tbl\_teaches} \bowtie \text{tbl\_section} \bowtie \text{tbl\_course})$

4.4. Find the names of all students who have taken the course title of "Game Design".

>> $\pi_{\text{Name}} (\sigma_{(\text{title = 'Game Design'})} (\text{tbl\_student} \bowtie \text{tbl\_takes} \bowtie \text{tbl\_section} \bowtie \text{tbl\_course}))$

4.5. For each department, find the maximum salary of instructors in that department. You may assume that every department has at least one instructor.

>> $_{\text{dept\_name}} G_{\text{max(salary)}} (\pi_{\text{dept\_name}}(\text{tbl\_instructor}))$

4.6. Find the lowest, across all departments, of the per-department maximum salary computed by the preceding query.

>> $_{\text{dept\_name}} G_{\text{min(salary)}} (_{\text{dept\_name}} G_{\text{max(salary)}} (\pi_{\text{dept\_name}}(\text{tbl\_instructor})))$

4.7. Find the ID and names of all students who do not have an advisor.

>> $\pi_{\text{id, student\_name}} (\sigma_{(\text{i\_id is NULL})} (\text{tbl\_student} \bowtie \text{tbl\_advisor}))$