1 Sample Homework

- Use *lstlisting* blocks for code and SQL answers. When writing SQL code, capitalize all SQL keywords.

```
SELECT DISTINCT student.ID
FROM (student join takes using (ID))
    JOIN (instructor JOIN teaches USING (ID))
    USING (course\_id, sec\_id, semester, year)
WHERE instructor\_name = "Einstein";
```

- Use the same blocks with proper JSON formatting for MongoDB answers.

```
{ "person":
  {"name":    "Jane Doe",
   "title":   "CIO",
   "address":  {
       "street":  "Baltic Ave.",
       "city":    "Atlantic City",
       "State":   "NJ",
       "zip":     40242
   }
  }
}
```

- For Relational Algebra LaTeX can do it all!

  - $\Pi_{\text{title}}(\sigma_{\text{dept\_name}=\text{"Comp. Sci."} \ \bigwedge \ credits=3} \ (\text{course}))$

  - $\Pi_{\text{ID}} \left(\sigma_{\text{ID}=\text{"Stonebraker"}} \ \left(takes \ \bowtie \ \rho_{(IID, \ course\_id, \ section\_id, \ semester, year)} \ \text{teaches}\right)\right)$
    . . .