Computer Science 301
Spring Quarter
Lab 5 (July 26)
Due: Friday, July, 29th

Implement the following Racket functions:

1. **Reflexive?**

   Input: a list of pairs, **L** and a list **S**. Interpreting **L** as a binary relation over the set **S**, **Reflexive?** returns **#t** if **L** is a reflexive relation over the set **S** and **#f** otherwise.

2. **Symmetric?**

   Input: a list of pairs, **L**. Interpreting **L** as a binary relation, **Symmetric?** returns **#t** if **L** is a symmetric relation and **#f** otherwise.

3. **Transitive?**

   Input: a list of pairs, **L**. Interpreting **L** as a binary relation, **Transitive?** returns **#t** if **L** is a transitive relation and **#f** otherwise.

4. **AntiTransitive?**

   Input: a list of pairs. Interpreting the input as a binary relation, AntiTransitive? returns **#t** if the binary relation is antitransitive and **#f** otherwise.

To turn this assignment in:

The lab will be turned online in the form of a Racket source file (i.e., an .rkt file) containing the definitions of the assigned functions. Please remember you source file should be properly documented with appropriate comments, including a specification of the author.