**CS 145 Practice Exam**

An \_\_\_\_\_\_\_\_\_\_\_\_\_\_ operation selects a particular component of an ADT object, an \_\_\_\_\_\_\_\_\_\_\_\_\_\_ creates an ADT object from its component parts, and an \_\_\_\_\_\_\_\_\_\_\_\_\_\_ operation asks whether an ADT object has a given property.

Explain the rules for private types. Which operations can be done on objects of a PRIVATE type?

'First and 'Last are two of the four attribute functions for unconstrained arrays. Name the other two:

What is the syntax for an unconstrained array type?

TYPE

Name and describe the following sorting algorithms:

1) Select Sort 2) Counting Sort

3) Bucket Sort 4) Radix Sort

What is the syntax for a generic specification?

GENERIC

What are the three basic operations on sets?

Explain the use of the discriminant field. Can a variant record have more than one discriminant field?

Explain the different between a constrained variant record and an unconstrained one.