9618 Computer Science — User Defined Datatypes

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1 Introduction

Notes of things that I wasn't too sure about for this part of the course.

2 Non-composite datatypes

2.1 Enumerated

An Enum is a list of possible values. In pseudocode, it's defined like so:

$$\text{TYPE <identifier> = (value1, value2, } \cdots \text{)}$$

You can use maths operators on value1, value2.... An Enum type has a name, an underlying data type (can be another UDT, or just INTEGERS) and also a set of members.

2.2 Pointers

Pointers are defined like so:

$$\text{TYPE <identifier> = ^<Typename>}$$

A pointer carries an **address** in memory. Typename can be any type stored at an address (INTEGERS, REALS, UDTs).
A pointer is like the page number of a book. Dereferencing that pointer is like flipping to that page, and reading the contents. To dereference, you do:

$$\text{<variable> } \leftarrow \text{ <PointerIdentifier>^}$$

3 Composite Datatypes

3.1 Records

Properties in records type are accessed by the dot notation.

3.2 Sets in Python

| is the union and & is the intersection.