

# CS335 - Python Compiler

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# Overview

- ▶ Adapting Bison
- ▶ Parses
- ▶ Required Features
- ▶ Additional Features
- ▶ Constraints
- ▶ Effort Sheet

# Adapting Bison

- ▶ Multiple Language Parser Support in Bison
  - ▶ E.g. `yyparse()`, `yypyparse()`, `yycppparse()`
- ▶ Adapted to perform several parses
- ▶ Modular Development

# Parses

- ▶ Parses
  1. Recording Declarations
  2. Type Checking
  3. 3-AC and Code Generation

# Required Features

- ▶ Have supported all the specifications
- ▶ Lists
  - ▶ First 8 bytes store size
  - ▶ On Heap
- ▶ Objects on Heap
- ▶ Function Call - Stack
- ▶ Simple Register Allocation Policy

# Additional Features

- ▶ Method-Calls via Class Name
  - ▶ `Car.print()`, `Animal.shout()`, `Parser.__init__()`
- ▶ Chained Attributes
  - ▶ `obj1.list1[i].obj2.obj3`
- ▶ Delayed Assignment of Lists

# Constraints

- ▶ *STRn* and *Ln* can't be Function Names
- ▶ `-no-pie`: Disabled Address Space Randomisation

# Effort Sheet

- ▶ Harsh Murdeshwar: 33.4 %
- ▶ Shubham Patel: 33.6 %
- ▶ Shubham Anand: 33.0 %



# Demo