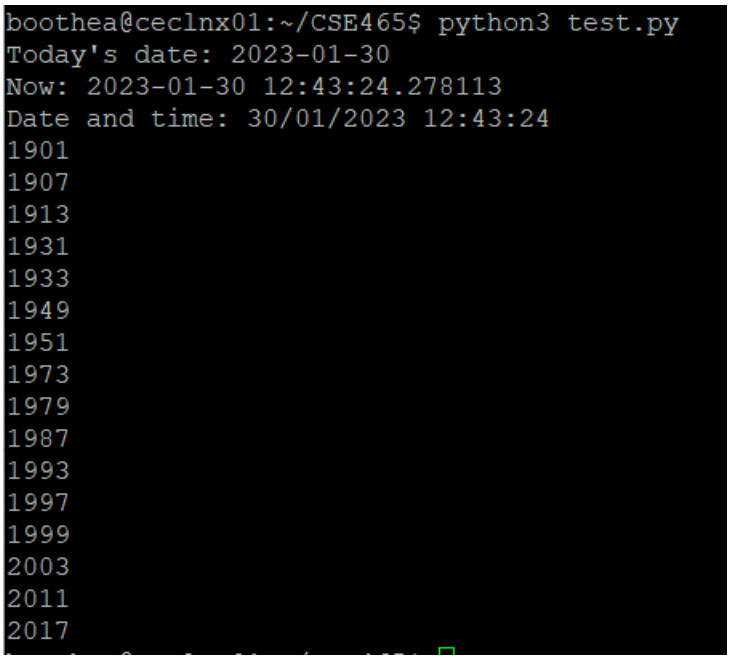
CSE 465/565
Spring 2023
Homework #1
50 points

Instructions: Submit to Canvas a single PDF file. For each exercise, you will see the points in parenthesis.

1. (10 p) Log into `ceclnx01.cec.miamioh.edu` and create a new folder for this class. Copy the file `test.py` provided to you into this new folder. On the `ceclnx01` server, run the following command:

```
python3 test.py
```

Type the command exactly as you see it above. Take a snapshot of the commands' output and insert it into your PDF.



Note: You are not required to understand the code in `test.py`. This exercise simply allows me to check that you can successfully use the `ceclnx01` server.

2. (20 p). Fill the table below with one advantage and one disadvantage for compilation and pure interpretation.

Implementation Method	***Advantage***	***Disadvantage***
Compilation	Fast execution, translation makes resulting program faster	Good compilers are difficult to write

Pure Interpretation	Runtime errors are immediately displayed	10-100 times slower execution than compiler

3. (10 p) In 2-3 sentences, describe the **JIT (Just-in-Time)** language implementation method.

Just-in-time implementation is the process of a code being compiled translated into an intermediary language like machine code before being executed. Just-in-time combines the dynamic error output of interpretation and efficiency of compilation. The resulting increased speed poses both benefits and restrictions as opposed to pure compilation or interpretation.

4. (10 p) What is the most common or prototypical language for the following **application domains** (according to the textbook)?

Business: **COBOL**
Scientific programming: **Fortan**
Systems programming: **C**