CS 61A: Structure and Interpretation of Computer Programs

Fall 2018
Instructor: John DeNero
MWF 1-2 in Wheeler Auditorium

Sunday, December 16

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- The final exam (assets/pdfs/61a-fa18-final.pdf) and solutions (assets/pdfs/61a-fa18-final-solution.pdf) are now available.

Week 15 Class Material

- Lecture 36: Natural Language
  Video (https://www.youtube.com/watch?v=y4pAAtR8Go4&list=PL6BsET-8jgYWG4V-QjUL2Q1r4sYY4KtaH&vq=hd1080)
  full (assets/slides/36-Natural_Language_full.pdf) 1pp (assets/slides/36-Natural_Language_1pp.pdf)
  8pp (assets/slides/36-Natural_Language_8pp.pdf) 36.zip (assets/slides/36.zip)
- Lecture 37: Final Examples
  Video (https://www.youtube.com/watch?v=NKkwOsn_8LM&list=PL6BsET-8jgYUbNDlOk6pspiVO8TcDHWPb&vq=hd1080)
  full (assets/slides/37-Final_Examples_full.pdf) 1pp (assets/slides/37-Final_Examples_1pp.pdf)
  8pp (assets/slides/37-Final_Examples_8pp.pdf) 37.py (assets/slides/37.py)
- Lecture 38: Conclusion
- CS 61A Textbook:

Week 15 Resources (/~cs61a/fa18/resources.html)

- Past Exams (resources.html#past-exams)
- Midterm 1 Staff Advice (resources.html#advice)
- Final Exam Resources (resources.html#final-ex

Week	Date	Lecture	
1	Wed 8/22	**Functions** Video (https://www.youtube.com/watch?v=pIbldGLvZi8&index=1&list=PL6BsET-8jgYWAxSjQsIHKdks2Jl1TD1W0&vq=hd1080) full (assets/slides/01-Functions_full.pdf) 1pp (assets/slides/01-Functions_1pp.pdf) 8pp (assets/slides/01-Functions_8pp.pdf) 01.py (assets/slides/01.py)	Ch. 1.1 (http://composingprograms.com/pages Ch. 1.2 (http://composingprograms.com/page
	Fri 8/24	**Names** Video (https://www.youtube.com/watch?v=I5mJCLY_WPk&list=PL6BsET-8jgYUiEvuczkTLyeOyxyjYbt8I&vq=hd1080) full (assets/slides/02-Names_full.pdf) 1pp (assets/slides/02-Names_1pp.pdf) 8pp (assets/slides/02-Names_8pp.pdf) 02.py (assets/slides/02.py)	Ch. 1.3 (http://composingprograms.com/page Ch. 1.4 (http://composingprograms.com/page
2	Mon 8/27	**Control** Video (https://www.youtube.com/watch?v=gcg6A9HgiPo&list=PL6BsET-8jgYWmbUDWrNaHgWZ6TUElKBW0&vq=hd1080) full (assets/slides/03-Control_full.pdf) 1pp (assets/slides/03-Control_1pp.pdf) 8pp (assets/slides/03-Control_8pp.pdf) 03.py (assets/slides/03.py)	Ch. 1.5 (http://composingprograms.com/page
	Wed 8/29	**Higher-Order Functions** Video (https://www.youtube.com/watch?v=tQR5ejQWuis&list=PL6BsET-8jgYVcca9trmJVoPpqgd1b3sO-&vq=hd1080) full (assets/slides/04-Higher-Order_Functions_full.pdf) 1pp (assets/slides/04-Higher-Order_Functions_1pp.pdf) 8pp (assets/slides/04-Higher-Order_Functions_8pp.pdf) 04.py (assets/slides/04.py)	Ch. 1.6 (http://composingprograms.com/page
	Fri 8/31	**Environments** Video (https://www.youtube.com/watch?v=Dk1GgPrLYyM&list=PL6BsET-8jgYU9mRSxd06NZTQrBBDDmMAT&vq=hd1080) full (assets/slides/05-Environments_full.pdf) 1pp (assets/slides/05-Environments_1pp.pdf) 8pp (assets/slides/05-Environments_8pp.pdf) 05.py (assets/slides/05.py)	Ch. 1.6 (http://composingprograms.com/page
3	Mon 9/3	**Iteration** Video (https://www.youtube.com/watch?v=9tfvjrw4GpU&list=PL6BsET-8jgYWrdpbzI0DwvzhILjAZ_Ur&vq=hd1080) full (assets/slides/06-Iteration_full.pdf) 1pp (assets/slides/06-Iteration_1pp.pdf) 8pp (assets/slides/06-Iteration_8pp.pdf) 06.py (assets/slides/06.py)	
	Wed 9/5	**Recursion** Video (https://www.youtube.com/watch?v=bbOTS6GX9cE&index=1&list=PL6BsET-8jgYU8INOyz8aqPQeIPce4YKIi&vq=hd1080) full (assets/slides/07-Recursion_full.pdf) 1pp (assets/slides/07-Recursion_1pp.pdf) 8pp (assets/slides/07-Recursion_8pp.pdf) 07.py (assets/slides/07.py)	Ch. 1.7 (http://composingprograms.com/pages
	Fri 9/7	**Function Examples** Video (https://www.youtube.com/watch?v=jYyeZ10j84A&list=PL6BsET-8jgYUCdBsfucjImvg_chQqO5K8&vq=hd1080) full (assets/slides/08-Function_Examples_full.pdf) 1pp (assets/slides/08-Function_Examples_1pp.pdf) 8pp (assets/slides/08-Function_Examples_8pp.pdf) 08.py (assets/slides/08.py)	
	Mon 9/10	**No Lecture** Midterm 1 (8-10 PM) (exams/midterm1.html)	
4	Wed 9/12	**Tree Recursion** Video (https://www.youtube.com/watch?v=2lONGDHmETk&list=PL6BsET-8jgYU7THlc_IaY-iRkD_oiMDTh&vq=hd1080) full (assets/slides/09-Tree_Recursion_full.pdf) 1pp (assets/slides/09-Tree_Recursion_1pp.pdf) 8pp (assets/slides/09-Tree_Recursion_8pp.pdf) 09.py (assets/slides/09.py)	Ch. 1.7 (http://composingprograms.com/pages
	Fri 9/14	**Data Abstraction** Video (https://www.youtube.com/watch?v=1z_Nm5HWgJ8&list=PL6BsET-8jgYUMeN9EB0nnmkKqmT73oS8q&vq=hd1080) full (assets/slides/10-Data_Abstraction_full.pdf) 1pp (assets/slides/10-Data_Abstraction_1pp.pdf) 8pp (assets/slides/10-Data_Abstraction_8pp.pdf) 10.py (assets/slides/10.py)	Ch. 2.1 (http://composingprograms.com/pages Ch. 2.2 (http://composingprograms.com/pag
5	Mon 9/17	**Containers** Video (https://www.youtube.com/watch?v=U6hJb4rKaWw&list=PL6BsET-8jgYWlXcFM1PhpG-U6Fzfw_Lgg&vq=hd1080) full (assets/slides/11-Containers_full.pdf) 1pp (assets/slides/11-Containers_1pp.pdf) 8pp (assets/slides/11-Containers_8pp.pdf) 11.py (assets/slides/11.py)	Ch. 2.3 (http://composingprograms.com/page
	Wed 9/19	**Trees** Video (https://www.youtube.com/watch?v=KhJGbkBiqyY&list=PL6BsET-8jgYUaSXVs8tFDuxBczBNtCUKb&vq=hd1080) full (assets/slides/12-Trees_full.pdf) 1pp (assets/slides/12-Trees_1pp.pdf) 8pp (assets/slides/12-Trees_8pp.pdf) 12.py (assets/slides/12.py)	Ch. 2.3 (http://composingprograms.com/page

	Fri 9/21	**Mutable Values** Video (https://www.youtube.com/watch?v=0lHRuW4yNIA&list=PL6BsET-8jgYVKfqrFWpEsGvgV3RfeC7ZP&vq=hd1080) full (assets/slides/13-Mutable_Values_full.pdf) 1pp (assets/slides/13-Mutable_Values_1pp.pdf) 8pp (assets/slides/13-Mutable_Values_8pp.pdf) 13.py (assets/slides/13.py)	Ch. 2.4 (http://composingprograms.com/page
	Mon 9/24	**Mutable Functions** Video (https://www.youtube.com/watch?v=B5t2PyfYvq0&list=PL6BsET-8jgYWYw87c6ImPPUgsbi3mQet4&vq=hd1080) full (assets/slides/14-Mutable_Functions_full.pdf) 1pp (assets/slides/14-Mutable_Functions_1pp.pdf) 8pp (assets/slides/14-Mutable_Functions_8pp.pdf) 14.py (assets/slides/14.py)	Ch. 2.4 (http://composingprograms.com/page
6	Wed 9/26	**Iterators** Video (https://www.youtube.com/watch?v=UyOUAoQkg9Q&list=PL6BsET-8jgYWSdhuyHlYhOJagEAvcHg7w&vq=hd1080) full (assets/slides/15-Iterators_full.pdf) 1pp (assets/slides/15-Iterators_1pp.pdf) 8pp (assets/slides/15-Iterators_8pp.pdf) 15.py (assets/slides/15.py)	Ch. 2.4 (http://composingprograms.com/page
	Fri 9/28	**Objects** Video (https://www.youtube.com/watch?v=p8OM9W17Qcw&list=PL6BsET-8jgYUNK5qrgtBURFJe4mmGk3-6&vq=hd1080) full (assets/slides/16-Objects_full.pdf) 1pp (assets/slides/16-Objects_1pp.pdf) 8pp (assets/slides/16-Objects_8pp.pdf) 16.py (assets/slides/16.py)	Ch. 2.5 (http://composingprograms.com/page
	Mon 10/1	**Inheritance** Video (https://www.youtube.com/watch?v=8nKjZVCyxiQ&list=PL6BsET-8jgYXI3_H28r5Bz7FhVHE2awdu&vq=hd1080) full (assets/slides/17-Inheritance_full.pdf) 1pp (assets/slides/17-Inheritance_1pp.pdf) 8pp (assets/slides/17-Inheritance_8pp.pdf) 17.py (assets/slides/17.py)	Ch. 2.5 (http://composingprograms.com/page
7	Wed 10/3	**Representation** Video (https://www.youtube.com/watch?v=PmlqOYakKS8&list=PL6BsET-8jgYUSKHA_30pB9RPzw2NuHhlm&vq=hd1080) full (assets/slides/18-Representation_full.pdf) 1pp (assets/slides/18-Representation_1pp.pdf) 8pp (assets/slides/18-Representation_8pp.pdf) 18.py (assets/slides/18.py)	Ch. 2.7 (http://composingprograms.com/page
	Fri 10/5	**Growth** Video (https://www.youtube.com/watch?v=lxbGU4wcDS0&list=PL6BsET-8jgYUGSZ4xXXyaFKOHhx4R11iF&vq=hd1080) full (assets/slides/19-Growth_full.pdf) 1pp (assets/slides/19-Growth_1pp.pdf) 8pp (assets/slides/19-Growth_8pp.pdf) 19.py (assets/slides/19.py) 19.ipynb (assets/slides/19.ipynb)	Ch. 2.8 (http://composingprograms.com/page
	Mon 10/8	**Composition** Video (https://www.youtube.com/watch?v=Brrn1zEfmto&list=PL6BsET-8jgYU8OOQ1tdGtpw47oKH9S5xL&vq=hd1080) full (assets/slides/20-Composition_full.pdf) 1pp (assets/slides/20-Composition_1pp.pdf) 8pp (assets/slides/20-Composition_8pp.pdf) 20.py (assets/slides/20.py)	Ch. 2.9 (http://composingprograms.com/page
8	Wed 10/10	**Ordered Sets** Video (https://www.youtube.com/watch?v=ysvhdD2gaCQ&list=PL6BsET-8jgYUYq_z8zy_6-v7v6P06R9Mj&vq=hd1080) full (assets/slides/21-Ordered_Sets_full.pdf) 1pp (assets/slides/21-Ordered_Sets_1pp.pdf) 8pp (assets/slides/21-Ordered_Sets_8pp.pdf) 21.py (assets/slides/21.py)	Ch. 2.9 (http://composingprograms.com/page
	Fri 10/12	**Tree Sets** Video (https://www.youtube.com/watch?v=BHg4_9X3oU0&list=PL6BsET-8jgYXhmBYGrfL_sTOTc1hcRTLW&t=0s&vq=hd1080) full (assets/slides/22-Tree_Sets_full.pdf) 1pp (assets/slides/22-Tree_Sets_1pp.pdf) 8pp (assets/slides/22-Tree_Sets_8pp.pdf) 22.py (assets/slides/22.py)	Ch. 2.9 (http://composingprograms.com/page
	Mon 10/15	**Data Examples** Video (https://www.youtube.com/watch?v=7P_OLJfF5N8&list=PL6BsET-8jgYXDXVG1ZCPT7hIt1vDJmDrq&vq=hd1080) full (assets/slides/23-Data_Examples_full.pdf) 1pp (assets/slides/23-Data_Examples_1pp.pdf) 8pp (assets/slides/23-Data_Examples_8pp.pdf) 23.py (assets/slides/23.py)	
9	Wed 10/17	No Lecture Midterm 2 (8-10 PM) (exams/midterm2.html)	
	Fri 10/19	**Users** Video (https://www.youtube.com/watch?v=u3WMWdhfx3U&list=PL6BsET-8jgYUlSbq0p54SmIzZ2JYPXGts&vq=hd1080)	
	Mon 10/22	**Scheme** Video (https://www.youtube.com/watch?v=ns5V0SohkHA&list=PL6BsET-8jgYXxTskye1nbvvKMbFFSmJ8U&vq=hd1080) full (assets/slides/25-Scheme_full.pdf) 1pp (assets/slides/25-Scheme_1pp.pdf) 8pp (assets/slides/25-Scheme_8pp.pdf) 25.scm (assets/slides/25.scm)	Ch. 3.1 (http://composingprograms.com/pages Ch. 3.2 (http://composingprograms.com/pag
10	Wed 10/24	**Exceptions** Video (https://www.youtube.com/watch?v=6KVMBt_ZOkk&list=PL6BsET-8jgYX6UKRm0fmo6kQ-WEoF6EdG&vq=hd1080) full (assets/slides/26-Exceptions_full.pdf) 1pp (assets/slides/26-Exceptions_1pp.pdf) 8pp (assets/slides/26-Exceptions_8pp.pdf) 26.py (assets/slides/26.py) 26.scm (assets/slides/26.scm)	Ch. 3.3 (http://composingprograms.com/page
	Fri 10/26	**Calculator** Video (https://www.youtube.com/watch?v=dWhjpXQZUww&list=PL6BsET-8jgYUe_Qet2FV1LzNq8fATNB6s&vq=hd1080) full (assets/slides/27-Calculator_full.pdf) 1pp (assets/slides/27-Calculator_1pp.pdf) 8pp (assets/slides/27-Calculator_8pp.pdf) 27.scm (assets/slides/27.scm)	Ch. 3.4 (http://composingprograms.com/page
	Mon 10/29	**Interpreters** Video (https://www.youtube.com/watch?v=F43ZUbl7pDY&list=PL6BsET-8jgYVYoMkgJmOsQEWdMSSFV2zW&vq=hd1080) full (assets/slides/28-Interpreters_full.pdf) 1pp (assets/slides/28-Interpreters_1pp.pdf) 8pp (assets/slides/28-Interpreters_8pp.pdf)	Ch. 3.5 (http://composingprograms.com/page
11	Wed 10/31	**Tail Calls** Video (https://www.youtube.com/watch?v=VlKBe_fgI-4&list=PL6BsET-8jgYXLxqukKii1RAZH7M-dJmil&vq=hd1080) full (assets/slides/29-Tail_Calls_full.pdf) 1pp (assets/slides/29-Tail_Calls_1pp.pdf) 8pp (assets/slides/29-Tail_Calls_8pp.pdf) 29.scm (assets/slides/29.scm)	Ch. 3.5 (http://composingprograms.com/page
	Fri 11/2	**Macros** Video (https://www.youtube.com/watch?v=m7Tilh_80K0&list=PL6BsET-8jgYVnjbmMJiahknp75ZJX_8x_&vq=hd1080) full (assets/slides/30-Macros_full.pdf) 1pp (assets/slides/30-Macros_1pp.pdf) 8pp (assets/slides/30-Macros_8pp.pdf) 30.scm (assets/slides/30.scm)	Ch. 3.5 (http://composingprograms.com/page
12	Mon 11/5	**Streams** Video (https://www.youtube.com/watch?v=mebpmUPGpGQ&list=PL6BsET-8jgYU8c0-4P1uREMgr-CXvK8TL&vq=hd1080) full (assets/slides/31-Streams_full.pdf) 1pp (assets/slides/31-Streams_1pp.pdf) 8pp (assets/slides/31-Streams_8pp.pdf) 31.scm (assets/slides/31.scm)	

Wed 11/7	**Declarative Programming** Video (https://www.youtube.com/watch?v=qH6F44Ft0Oo&list=PL6BsET-8jgYUzGbLeB0UjKjJnGAtxO43h&vq=hd1080) full (assets/slides/32-Declarative_Programming_full.pdf) 1pp (assets/slides/32-Declarative_Programming_1pp.pdf) 8pp (assets/slides/32-Declarative_Programming_8pp.pdf) 32.sql (assets/slides/32.sql)	Ch. 4.3 (http://composingprograms.com/page
Fri 11/9	**Tables** Video (https://www.youtube.com/watch?v=HtOsdHYkv9w&list=PL6BsET-8jgYVk_CBkIP9WbxckgwMIWuTk&vq=hd1080) full (assets/slides/33-Tables_full.pdf) 1pp (assets/slides/33-Tables_1pp.pdf) 8pp (assets/slides/33-Tables_8pp.pdf) 33.sql (assets/slides/33.sql)	Ch. 4.3 (http://composingprograms.com/page
Mon 11/12	No Lecture: Veterans Day	
Wed 11/14	**Aggregation** Video (https://www.youtube.com/watch?v=msGmRIA7YV8&list=PL6BsET-8jgYVSWsg45Zm-aSb7it_mvuOZ&vq=hd1080) full (assets/slides/34-Aggregation_full.pdf) 1pp (assets/slides/34-Aggregation_1pp.pdf) 8pp (assets/slides/34-Aggregation_8pp.pdf) 34.sql (assets/slides/34.sql)	Ch. 4.3 (http://composingprograms.com/page
Fri 11/16	No Lecture: Classes Cancelled	
Mon 11/19	**Databases** Video (https://www.youtube.com/watch?v=zCkuQDtSlUc&list=PL6BsET-8jgYWoTuANOebuQVct9mAovzga&vq=hd1080) full (assets/slides/35-Databases_full.pdf) 1pp (assets/slides/35-Databases_1pp.pdf) 8pp (assets/slides/35-Databases_8pp.pdf) 35.py (assets/slides/35.py) 35.sql (assets/slides/35.sql)	Ch. 4.3 (http://composingprograms.com/page
Wed 11/21	No Lecture: Thanksgiving	
Fri 11/23	No Lecture: Thanksgiving	
Mon 11/26	**Natural Language** Video (https://www.youtube.com/watch?v=y4pAAtR8Go4&list=PL6BsET-8jgYWG4V-QjUL2Q1r4sYY4KtaH&vq=hd1080) full (assets/slides/36-Natural_Language_full.pdf) 1pp (assets/slides/36-Natural_Language_1pp.pdf) 8pp (assets/slides/36-Natural_Language_8pp.pdf) 36.zip (assets/slides/36.zip)	
Wed 11/28	**Final Examples** Video (https://www.youtube.com/watch?v=NKkwOsn_8LM&list=PL6BsET-8jgYUbNDlOk6pspiVO8TcDHWPb&vq=hd1080) full (assets/slides/37-Final_Examples_full.pdf) 1pp (assets/slides/37-Final_Examples_1pp.pdf) 8pp (assets/slides/37-Final_Examples_8pp.pdf) 37.py (assets/slides/37.py)	
Fri 11/30	Conclusion	
Wed 12/12	Final (7-10 PM) (exams/final.html)	

Week numbers: 13, 14, 15, 16

CS 61A (/~cs61a/fa18/)

Weekly Schedule (/~cs61a/fa18/weekly.html)

Office Hours (/~cs61a/fa18/office-hours.html)

Staff (/~cs61a/fa18/staff.html)

Resources (/~cs61a/fa18/resources.html)

Studying Guide (/~cs61a/fa18/articles/studying.html)

Debugging Guide (/~cs61a/fa18/articles/debugging.html)

Composition Guide (/~cs61a/fa18/articles/composition.html)

Policies (/~cs61a/fa18/articles/about.html)

Assignments (/~cs61a/fa18/articles/about.html#assignments)

Exams (/~cs61a/fa18/articles/about.html#exams)

Grading (/~cs61a/fa18/articles/about.html#grading)