



AP CS Principles Resource Development

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Introduction

The *AP CS Principles* project is intended to improve the recruitment of students into Computer Science. We are training High School teachers and developing resources to help pilot this course.

Unlike previous AP CS Courses, *CS Principles* is extremely flexible, doesn't mandate a specific language, and is graded on a student portfolio rather than a multiple-choice test.



What We've Done

- Developed content and projects to address the *AP CS Principles* big ideas of *Data* and the *Internet*.
- Aligned the learning objectives of Leslie Keller's BJC Moodle Course with the *AP CS Principles* syllabus guidelines.

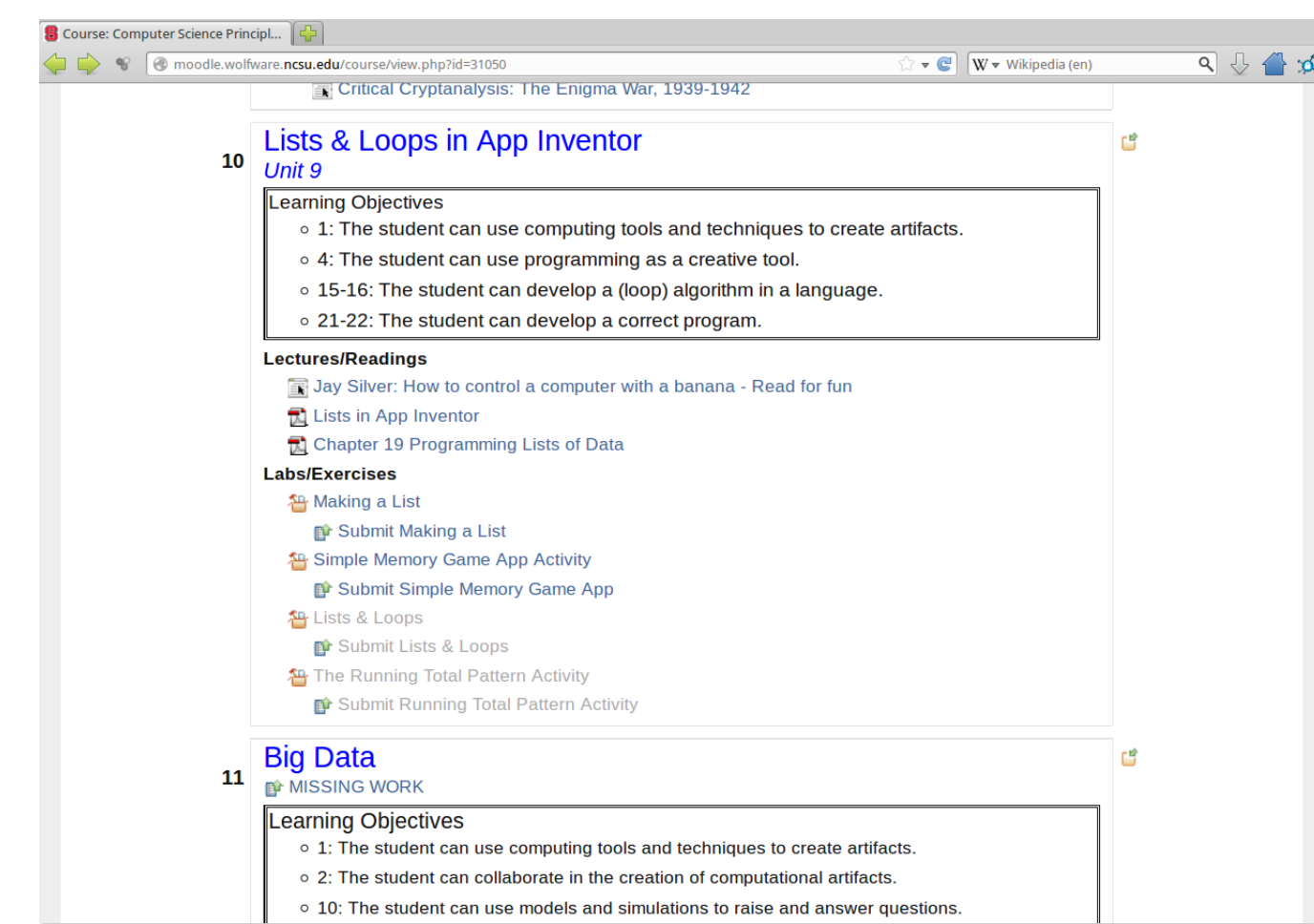
The Beauty & Joy of Computing Portfolio



The Beauty and Joy of Computing is a course developed as a pilot for the *AP CS Principles* Syllabus, with an emphasis on building creative artifacts through programming.

Data

- Students plan an investigation and develop research questions that require a large data set
- They produce an artifact of the investigation, such as a visualization
- They describe how to reproduce the study



A screenshot of the BJC Moodle Module

Internet

- Students identify a potential problem in contemporary society that can be solved utilizing the Internet
- Write an essay documenting the problem and their solution, integrating concepts from course materials

Programming

- Students develop two programs to solve a problem
- One is developed collaboratively as part of a team and the other is written individually
- Students can choose any problem or subject area, allowing them to choose something relevant to them

Conclusion

We are creating a Moodle module for BJC that is currently being used to teach High School students.

This module and its resources can serve as a template for new iterations of BJC in High School.

Future Work

- Create an online community of practice for instructors to share and remix resources for teaching BJC
- Hold monthly webinars to build a community of teachers
- Bring the course up to the standards of AP CS Principles to launch an officially sanctioned pilot



Acknowledgements

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