

# Lesson 12: Natural Language Processing Project – Day 2

45 minutes

## Overview

### How will I implement my plans to create my program?

Students planned their classes and algorithms to create a program that analyzes, manipulates, and/or generates text using natural language processing techniques. Students continue to develop their projects to implement algorithms to analyze text and interact with a user. Students reinforce software development skills and processes as they participate in a code review to give and use feedback as they develop their program.

## Agenda

### Warm Up (10 minutes)

#### Software Engineers

### Activity (30 minutes)

#### Development

#### Code Review

#### Revisions, Updates, and Reviews

### Wrap Up (5 minutes)

#### Project Reflection

#### Assessment (Optional)

## Objectives

Students will be able to:

- Conduct code reviews to give and receive feedback on program code
- Implement algorithms to analyze, manipulate, or generate text using natural language processing techniques

## Preparation

- Create code review groups if you are not reusing the same groups
- Check the **Teacher's Lounge** for verified teachers on the CSA Forum to find additional strategies or resources shared by fellow teachers

## Teaching Guide

### Warm Up (10 minutes)

Software Engineers

### Remarks

Like in the examples we have seen in this unit, you are using computer science to analyze, manipulate, and generate text using natural language processing techniques. You are also using your software engineering characteristics to create your programs.

 **Do This:** Direct students to respond to the prompt on the Natural Language Processing Project Planning Guide.

If time permits, have students share their thoughts and ideas with a neighbor.

## Activity (30 minutes)

Development (10 minutes)

### 🎤 Remarks


Continue to work on your Natural Language Processing Project. Be sure to refer to the project requirements and rubric to make sure you include the necessary components.


 **Do This:** Direct students to Level 1 on Code Studio to continue developing their projects.

 1

**Natural Language Processing Project**

Code Review (10 minutes)

 **Do This:** Play the music clip to cue committing their code and saving their classes to the Backpack.

 **Do This:** Click through the animated slide to have students participate in the Code Review Call and Response.

 **Do This:** Direct students to complete a code review on their program on Level 2.

 2


**Code Review: Natural Language Processing Project**

Revisions, Updates, and Reviews (10 minutes)

### 🎤 Remarks

You have a lot of feedback from the code review to help improve your program! Let's review our tasks and priorities and plan updates based on the feedback we received and what we have left to complete.

 **Do This:** Have students self-assess their project using the program requirements and rubric on the Natural Language Processing Project Planning Guide.

 **Do This:** Have students create a prioritized list of upgrades, changes, and things they still need to complete on the Natural Language Processing Project Planning Guide based on the feedback they received from the code review and their rubric self-assessment.


If students finish their prioritized list early, encourage them to start working on their #1 priority.

## Wrap Up (5 minutes)

## Project Reflection

### *Remarks*

You made a lot of progress on your project today! Let's take a moment to reflect on what you have accomplished so far and what you need to focus on next.

 **Do This:** Direct students to respond to the Day 2 Reflection prompt on the Natural Language Processing Project Planning Guide.

#### Teaching Tip

If time permits, have students share their thoughts and ideas with a neighbor.

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## Assessment (Optional)

**Natural Language Processing Project Planning Guide:** You can use the Day 2 Reflection as an optional completion assessment.



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