

Written Response - Create Task

- a. The programming language I used to create my program is Java. When I first approached the create task, I had no idea what I wanted to do other than that I wanted to work with online sources and source code. I had been watching the presidential elections at the time and felt that many of the news stations held bias opinions against Donald Trump, the representative for the republican party. I tried to find unbiased news articles about the election. However, only a few websites were reliable. The Wall Street Journal was one of those online sources. The purpose of my program is to be able to find recent and unbiased news articles given a place, zip code, or key words that is input by the user. The video illustrates how simply the user can search for news, how quickly the search results appear, and also where the articles were found.
- b. I created a class named NewsSearch and started by accessing the source code of news articles provided by the Wall Street Journal. Once I did that, I had to figure out where in the code the titles were located. To do this, I had to search for them by using the `indexOf()` method. Afterwards, I established how the url links were formatted and created a variable that held the url format. I also had to use a different website to change zip codes into cities/towns. I used a similar process to the route I took in finding the title in the articles. Once I did this and implemented it, I realized a lot of the code I had used was repetitive, so I had to go back and create several functions that are used multiple times within the process of searching up a keyword. After the functions were implemented, I asked for feedback from my friends and they said that it took too long to search for the articles, so I had to make my search more targeted by looking through less of the source code. After that process was finished, I had gotten a responsive news search engine.
- c. Within my `checkNews()` function, I implemented two other essential functions named `zipToPlace()` and `placeToArticle()`. The first function, `zipToPlace` searches through the source code of a specific website URL that I concatenated through user input. The function gets the location of a given 5 digit zip code, assuming it is a valid U.S. zip code. Otherwise, it returns "City not found" and ends the program. To search through the zip code and be able to find the correct city name, I had to find a key phrase common through all the pages of source code with different zip codes. The phrase I found was "`</small></td><td>`". I had to add 17 characters on top of where "`</small></td><td>`" started to be able to find the city. Because I can find the city corresponding to a given zip code, I can combine it with the `placeToArticle` function, which can find the articles given a location or keyword. It searches iteratively through another URL to find the article names and stores them in separate private variables. Once I got these to work, I could finally find some news articles.
- d. The code I boxed was integral in managing how often messy and disruptive my code was. I had to create separate functions to be able to change one thing in the `checkNews`

function without worrying how checking for articles or locations would be affected. By doing so, I can call upon the searching methods multiple times and it wouldn't be a hassle or become hard to read and interpret. Instead, it is easy and simple to understand how my code functions and what the main premises of how the checkNews function operates without the inconvenience of spending time re-reading the same code over and over again.