

Project 2

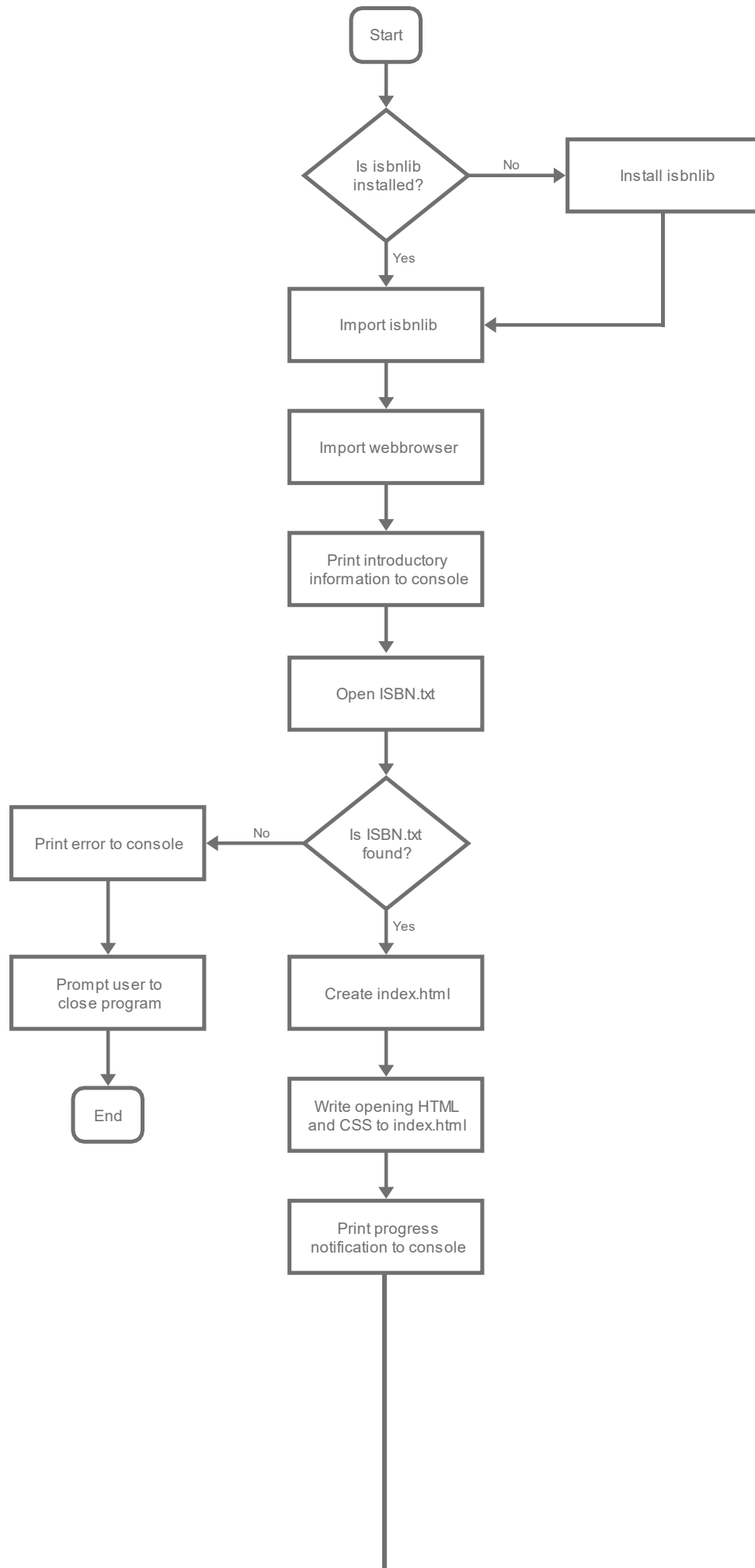
Programming for Design

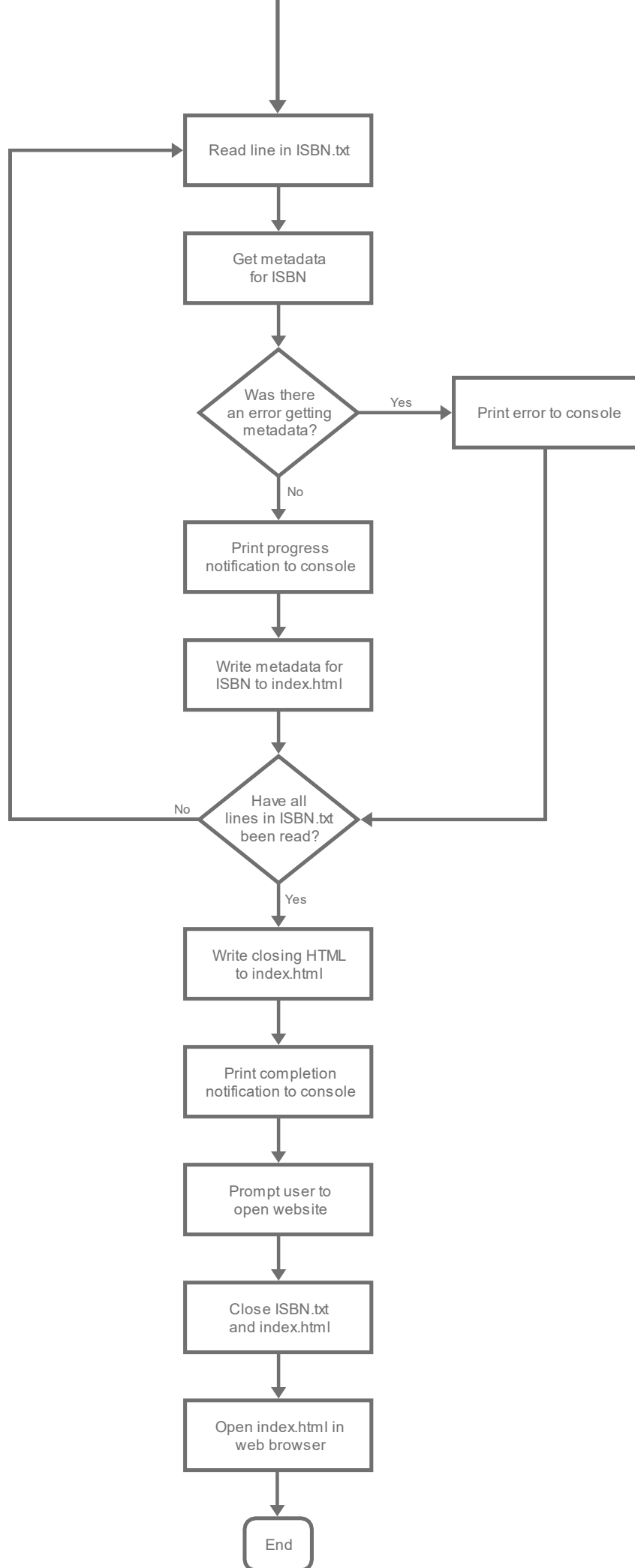
ISBN search engine

Table of Contents

1. [Flow chart](#)
2. [Pseudo-code](#)
3. [Reflection](#)

1. Flow chart





2. Pseudo-code

```
1. import isbnlib
2. IF isbnlib cannot be imported
3.     install isbnlib
4.
5. import webbrowser
6.
7. print "----- BookLook -----"
8. print "Opening file: ISBN.txt"
9.
10. open ISBN.txt
11. IF ISBN.txt cannot be opened
12.     print "ERROR: File name ISBN.txt not found"
13.     prompt user to close program
14.
15. create index.html
16.
17. write opening HTML and CSS to index.html
18.
19. print "Searching metadata..."
20.
21. DO WHILE unread lines in ISBN.txt = true
22.     print "Getting information for ISBN"
23.     get metadata for ISBN
24.     write HTML to index.html
25.     IF metadata cannot be found
26.         print "ERROR: Could not get information for ISBN"
27. LOOP
28.
29. write closing HTML to index.html
30.
31. print "Website complete!"
32.
33. prompt user to open index.html
34.
35. close ISBN.txt and index.html
36.
37. open index.html with webbrowser
```

3. Reflection

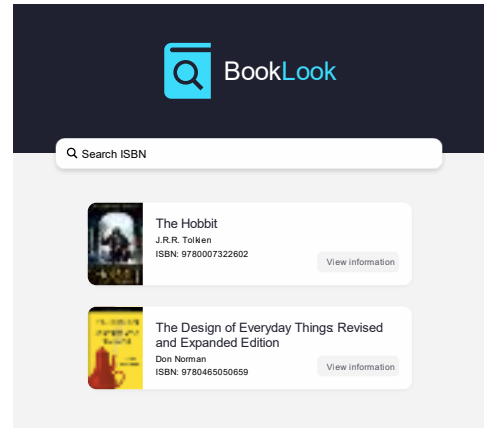
Design inspiration

Before I began programming my Python script, I wanted to design and develop the website that my program would generate with placeholder sections for the ISBN results.

I used design inspiration from a [hotel listing website](#) as well as a [pet adoption app](#) to create a wireframe design of what I wanted my website to look like. I also used a made-up name and logo for my website. I then developed the website HTML and CSS based on the design of the wireframe.

Through designing and developing the website before creating my program, I was able to better understand how my program would handle getting the ISBN results and where they would be placed.

I am very pleased with the design of the website and I'm glad it looks quite similar to my original wireframe design.



Error handling

The main concept that this project taught me was the importance of error handling. As there were many situations that could result in my program crashing, proper use of error handling had to be implemented.

The situations that could potentially crash my program included:

- isbnlib not being found
- ISBN.txt not being found
- ISBN metadata not being found

Therefore, I used several try except statements to attempt instructions and provide an error if the attempt failed, rather than completely terminating my program.

HTML and CSS quality

It was important for me that the HTML and CSS that my Python script would generate was formatted and structured correctly. I wanted the index.html file to look and feel as though it was written manually so I ensured that the HTML and CSS in my Python program had the correct indentation and formatting. I also used alternative text descriptions for the images of the book covers.

```
alt="The Hobbit by J. R. R. Tolkien"
```

isbnlib

In order to retrieve the metadata for each ISBN, I used a Python library called [isbnlib](#). This library allowed me to easily use the ISBN's from the text file to pull relevant information such as the title and author of the book.

Conclusion

This was a really fun and interesting project to complete.

Creating the flow charts and pseudo-code was much easier this time as I had built upon my knowledge gained in project 1. The whole planning process felt much more natural and gave me a better understanding of how to approach the task. I'm also glad I designed and developed my website prior to programming my Python script as it allowed me to easily copy and paste my HTML and CSS code into my Python program.

I learnt a lot about error handling and how to ensure that errors are controlled properly. It really taught me the importance of breaking your own program before others do so. I also learnt about libraries and how to utilise their functionality for different objectives.

Overall, I enjoyed completing each component of this project and generally speaking, I have really enjoyed the learning and content involved with this unit.