

COMPILER CONSTRUCTION ASSIGNMENT #3



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Task:**Code:**

```
import xml.etree.ElementTree as ET
import openpyxl

# parse the XML file
tree = ET.parse("C:/Users/Dell/Downloads/compiler.xml")

# get the root element of the XML document
root = tree.getroot()

# create a list to store the extracted data
data = []

# iterate over the book elements in the XML file
for book in root.findall("book"):
    # create a dictionary to store the data for each book
    book_data = {}
    # extract the data for each book
    book_data["Book_Id"] = book.get("id")
    book_data["Author_Name"] = book.find("author").text
    book_data["Title"] = book.find("title").text
    book_data["Genre"] = book.find("genre").text
    book_data["Price"] = book.find("price").text
    book_data["Publish_date"] = book.find("publish_date").text
    book_data["Description"] = book.find("description").text
    # add the book data to the list
    data.append(book_data)
```

```

# create a new Excel file

wb = openpyxl.Workbook()

# create a sheet in the Excel file

sheet = wb.active

# add the column headings to the sheet

sheet.append(["Book_Id", "Author_Name", "Title", "Genre", "Price", "Publish_date",
"Description"])

# add the extracted data to the sheet

for book in data:

    sheet.append([book["Book_Id"], book["Author_Name"], book["Title"], book["Genre"],
book["Price"], book["Publish_date"], book["Description"]])

# save the Excel file

wb.save("200901080_Assignment_03.xlsx")

```

Explanation:

The XML DOM specifies the characteristics and methods for accessing and editing XML (Document Object Model). However, in order to access an XML document, an XML DOM object must first be loaded.

In this XML assignment, we've created an array with the name of a book list, and after that, we append the attributes (Book_Id, Author_Name, Title, Genre, Price, Publish_date, Description), and then we switch the compiler to the right mode and create a CSV file, where we again create the attributes (Book_Id, Author_Name, Title, Genre, Price, Publish_date, Description) and perform the append function.

When the process is finished, a file with the name we gave it while creating it is created in our project, and the final output is then saved

Github link:

<https://github.com/ABDULHADI44>