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Task: Lab 9

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Lab Task 9: Python Program for Document Handling

```python
class Document:
    def __init__(self, title, author):
        self.title = title
        self.author = author

    def display_info(self):
        print(f"Title: {self.title}, Author: {self.author}")


class Book(Document):
    def __init__(self, title, author, genre=None, pages=None):
        super().__init__(title, author)
        self.genre = genre
        self.pages = pages

    def display_info(self):
        super().display_info()
        print(f"Genre: {self.genre}, Pages: {self.pages}")


class Article(Document):
```

```python
    def __init__(self, title, author, journal=None, doi=None):
        super().__init__(title, author)
        self.journal = journal
        self.doi = doi

    def display_info(self):
        super().display_info()
        print(f"Journal: {self.journal}, DOI: {self.doi}")

def save_data(title, author, genre=None, pages=None, journal=None, doi=None):
    with open("document.txt", "a") as f:
        if genre is not None and pages is not None:
            f.write(f"Book: {title}, {author}, {genre}, {pages}\n")
        elif journal is not None and doi is not None:
            f.write(f"Article: {title}, {author}, {journal}, {doi}\n")
        else:
            f.write(f"Document: {title}, {author}\n")


def read_data():
    with open("document.txt", "r") as f:
        data = f.readlines()
        for line in data:
            print(line.strip())

def write_data():
    print("Press 1 to write book information")
    print("Press 2 to write article information")
    choice = int(input("Enter your choice: "))

    if choice == 1:
        print("Enter book information:")
        title = input("Enter book title: ")
        author = input("Enter book author: ")
        genre = input("Enter book genre: ")
        pages = input("Enter book pages: ")
```

```python
        save_data(title, author, genre, pages)

    elif choice == 2:
        print("Enter article information:")
        title = input("Enter article title: ")
        author = input("Enter article author: ")
        journal = input("Enter article journal: ")
        doi = input("Enter article DOI: ")
        save_data(title, author, journal=journal, doi=doi)

    else:
        print("Invalid input")


def main():
    print("Press 1 to write data")
    print("Press 2 to read data")
    choice = int(input("Enter your choice: "))

    if choice == 1:
        write_data()
    elif choice == 2:
        read_data()
    else:
        print("Invalid input")
```