```
5class Rectangle:
    def __init__(self, length, width):
        self.length = length
        self.width = width

    def area(self):

        return self.length * self.width

    def perimeter(self):

        return 2 * (self.length + self.width)
if __name__ == "__main__":
    length = float(input("Enter the length of the rectangle: "))
    width = float(input("Enter the width of the rectangle: "))
    rect = Rectangle(length, width)

    print("Area:", rect.area())
    print("Perimeter:", rect.perimeter())
```

```
Enter the length of the rectangle: 56
Enter the width of the rectangle: 55
Area: 3080.0
Perimeter: 222.0
```

```
class Student:
    def __init__(self, name):
        self.name = name
        self.grades = []

    def add_grade(self, grade):

        if isinstance(grade, int):

            self.grades.append(grade)
        else:
            print("Please enter a valid integer grade.")

    def get_average(self):

        if self.grades:
            return sum(self.grades) / len(self.grades)
        return 0


    def get_grades(self):

        return self.grades


if __name__ == "__main__":


    student_name = input("Enter the student's name: ")
    student = Student(student_name)



    while True:
        grade_input = input("Enter a grade (or type 'done' to finish): ")
        if grade_input.lower() == 'done':
            break
        try:
            grade = int(grade_input)
            student.add_grade(grade)
        except ValueError:
            print("Invalid input. Please enter an integer grade.")
    print("Grades:", student.get_grades())
    print("Average Grade:", student.get_average())
```

```
Enter the student's name: 55
Enter a grade (or type 'done' to finish): 5
Enter a grade (or type 'done' to finish): 89
Enter a grade (or type 'done' to finish): 65
Enter a grade (or type 'done' to finish): 59
Enter a grade (or type 'done' to finish): 70
Enter a grade (or type 'done' to finish): 96
Enter a grade (or type 'done' to finish): 98
Enter a grade (or type 'done' to finish): done
```

```
Grades: [5, 89, 65, 59, 70, 96, 98]
Average Grade: 68.85714285714286
```

```
class Library:
    def __init__(self):
        self.books = []

    def add_book(self, book):

        self.books.append(book)

    def remove_book(self, book):


        if book in self.books:
            self.books.remove(book)
            print(f"'{book}' has been removed from the library.")
        else:
            print(f"'{book}' not found in the library.")

    def list_books(self):

        if self.books:
            print("Books in the library:")
            for book in self.books:
                print(f"- {book}")
        else:
            print("No books in the library.")


if __name__ == "__main__":
    library = Library()

    while True:
        action = input("Choose an action: add, remove, list, or quit: ").strip().lower()

        if action == "add":
            book_title = input("Enter the book title to add: ")
            library.add_book(book_title)
            print(f"'{book_title}' has been added to the library.")

        elif action == "remove":
            book_title = input("Enter the book title to remove: ")
            library.remove_book(book_title)

        elif action == "list":
            library.list_books()

        elif action == "quit":
            print("Exiting the library management system.")
            break

        else:
            print("Invalid action. Please choose add, remove, list, or quit.")
```

```
Choose an action: add, remove, list, or quit: add
Enter the book title to add: hello
'hello' has been added to the library.
Choose an action: add, remove, list, or quit: add
Enter the book title to add: show
'show' has been added to the library.
Choose an action: add, remove, list, or quit: add
Enter the book title to add: index
'index' has been added to the library.
Choose an action: add, remove, list, or quit: remove
Enter the book title to remove: w
'w' not found in the library.
Choose an action: add, remove, list, or quit: list
Books in the library:
- hello
- show
- index
Choose an action: add, remove, list, or quit: remove
Enter the book title to remove: show
'show' has been removed from the library.
Choose an action: add, remove, list, or quit: quit
Exiting the library management system.
```