

Nom

Prenom

N° Etudiant

Controle N1

MksjBCc3

What will be the output of the code?

```
def filter_odd_numbers(numbers):  
    return [num for num in numbers if num % 2 != 0]  
  
nums = [2, 3, 4, 5, 6]  
filtered = filter_odd_numbers(nums)  
print(filtered)
```

- ☐ [2, 4, 6]
- ☐ [3, 5]
- ☐ [2, 4, 6, 3, 5]
- ☐ [3, 4, 5]

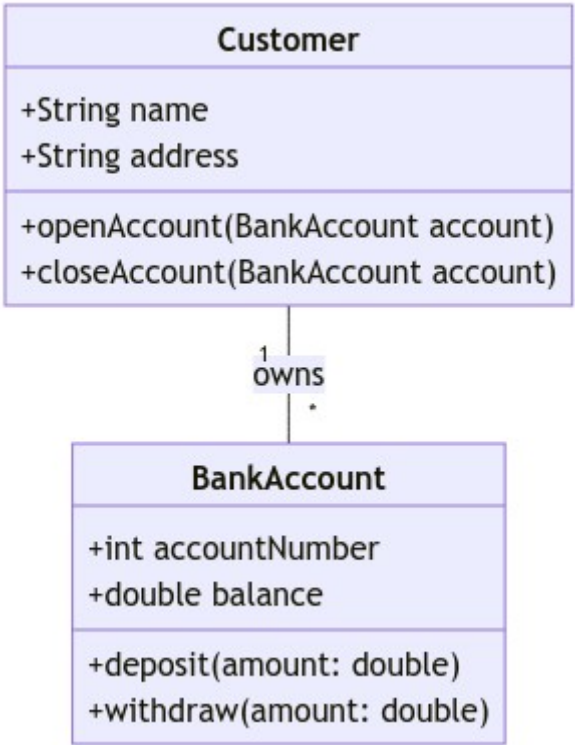
wAD21uWg

What will be the output of the code?

```
numbers = [1, 2, 3, 4, 5]  
squared_numbers = [x**2 for x in numbers if x % 2 == 0]  
print(squared_numbers)
```

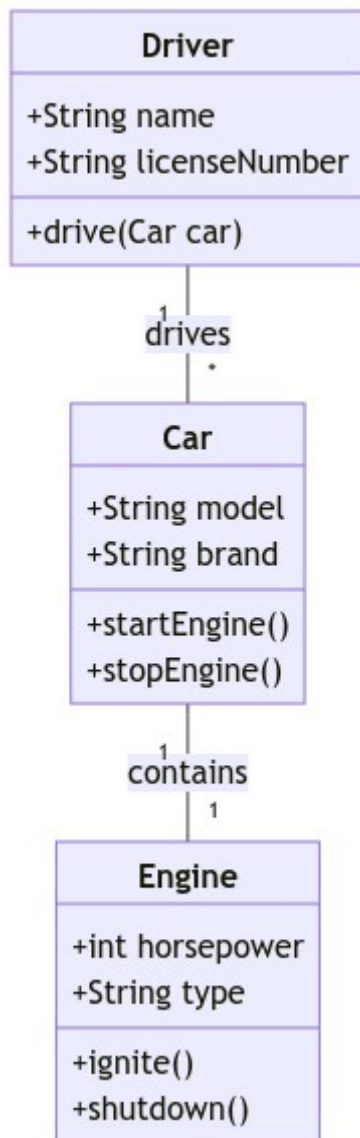
- ☐ [1, 4, 9, 16, 25]
- ☐ [1, 9, 25]
- ☐ [4, 16]
- ☐ [2, 4]

What type of relationship is shown between the Customer and BankAccount classes?



- ☐ Inheritance
- ☐ Aggregation
- ☐ Composition
- ☐ Association

What type of relationship exists between the Car and Engine classes in the diagram?



- ☐ Inheritance
- ☐ Aggregation
- ☐ Composition
- ☐ Association

What will be the output of the code?

```
def append_value(lst, value=None):  
    if value is not None:  
        lst.append(value)  
    return lst  
  
my_list = [1, 2, 3]  
result = append_value(my_list, 4)  
print(result)
```

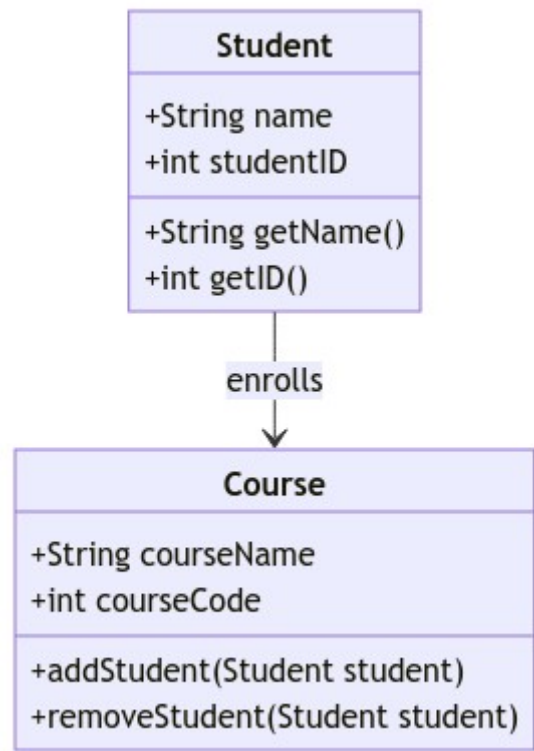
- ☐ [1, 2, 3]
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- ☐ [4]
- ☐ [1, 2, 3, None]

What will be the output of the code?

```
def update_dict(d, key, value):  
    d[key] = value  
    return d  
  
my_dict = {'a': 1, 'b': 2}  
result = update_dict(my_dict, 'b', 3)  
print(result)
```

- ☐ {'a': 1, 'b': 2}
- ☐ {'a': 1, 'b': 3}
- ☐ {'a': 1, 'b': '3'}
- ☐ {'a': 1, 'b': 2, '3': 3}

What is the diagram's relationship between the Student and Course classes?



- ☐ The Student class inherits from the Course class.
- ☐ The Student class is associated with the Course class.
- ☐ The Course class is an interface implemented by Student.
- ☐ The Student class is composed of the Course class.

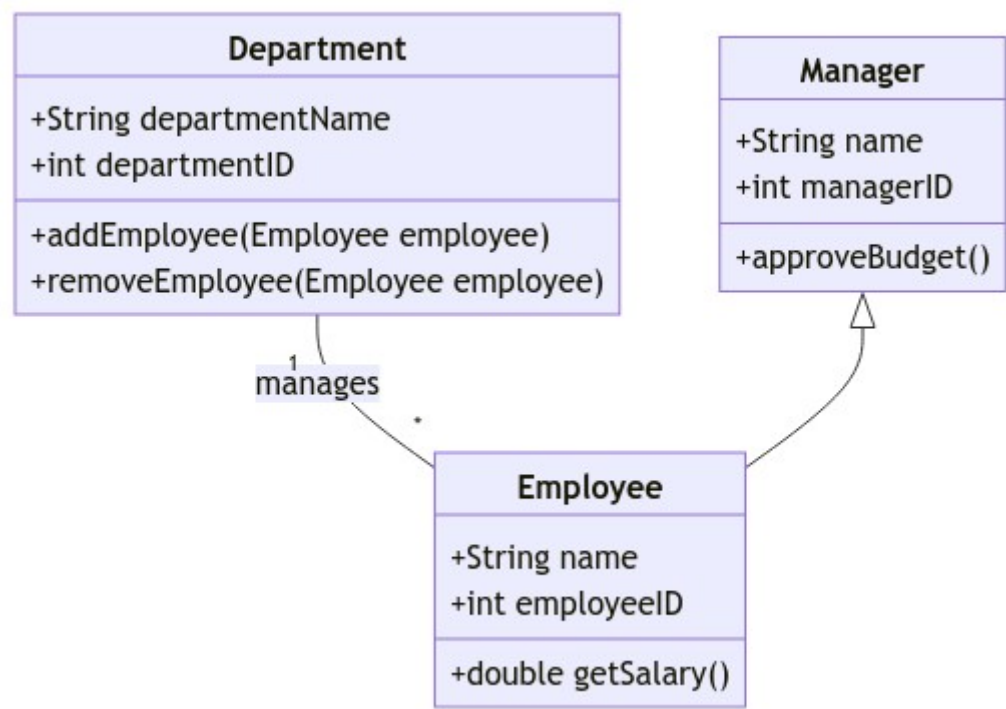
What will be the output of the code?

```
def calculate_sum(a, b=5):
    return a + b

result = calculate_sum(10)
print(result)
```

- ☐ 10
- ☐ 15
- ☐ 5
- ☐ Error

What is the relationship between the Manager and Employee classes in the diagram?



- ☐ Inheritance
- ☐ Aggregation
- ☐ Composition
- ☐ Association

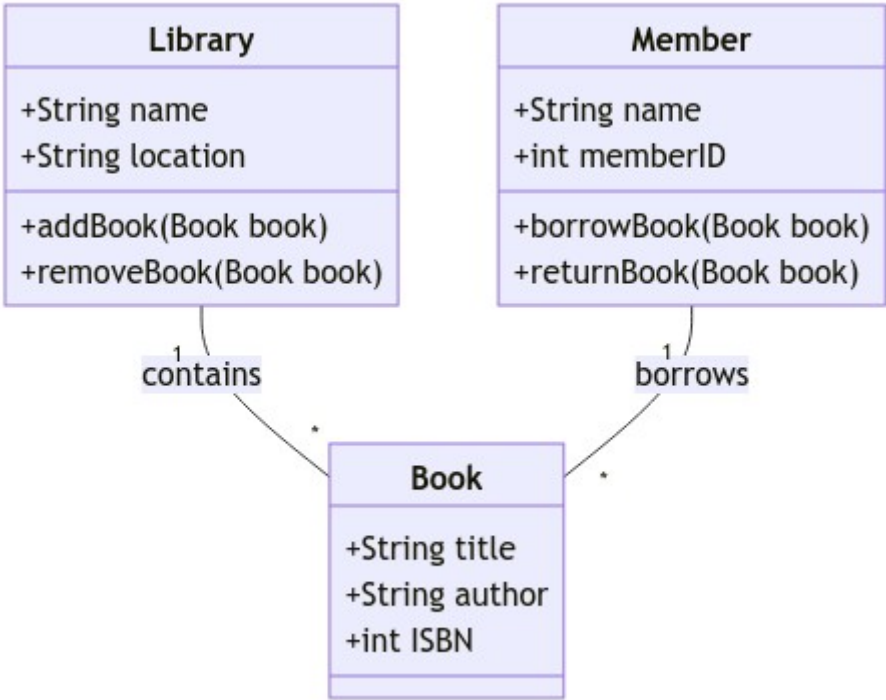
liLilloV

Using the table below, determine the molarity of each solution if the total volume is 1 liter.

Solute	Mass (g)	Molar Mass (g/mol)
Sodium Hydroxide (NaOH)	40	40.0
Potassium Chloride (KCl)	74	74.0
Calcium Chloride (CaCl ₂)	147	147.0
Ammonium Nitrate (NH ₄ NO ₃)	80	80.0

- ☐ (NaOH): 1.0 M;(KCl): 1.0 M;(CaCl₂): 1.0 M;(NH₄NO₃): 1.0 M
- ☐ (NaOH): 0.5 M;(KCl): 0.5 M;(CaCl₂): 0.5 M;(NH₄NO₃): 0.5 M
- ☐ (NaOH): 1.0 M;(KCl): 0.5 M;(CaCl₂): 0.68 M;(NH₄NO₃): 1.0 M
- ☐ (NaOH): 0.8 M;(KCl): 1.0 M;(CaCl₂): 1.0 M;(NH₄NO₃): 0.8 M

What type of relationship exists between the Library and Book classes in the diagram?



- ☐ Inheritance
- ☐ Aggregation
- ☐ Composition
- ☐ Association

Controle N2

hjbpbt0e

What will be the output of the code?

```
def update_dict(d, key, value):  
    d[key] = value  
    return d  
  
my_dict = {'a': 1, 'b': 2}  
result = update_dict(my_dict, 'b', 3)  
print(result)
```

- ☐ {'a': 1, 'b': 2}
- ☐ {'a': 1, 'b': 3}
- ☐ {'a': 1, 'b': '3'}
- ☐ {'a': 1, 'b': 2, '3': 3}

wAD21uWg

What will be the output of the code?

```
numbers = [1, 2, 3, 4, 5]  
squared_numbers = [x**2 for x in numbers if x % 2 == 0]  
print(squared_numbers)
```

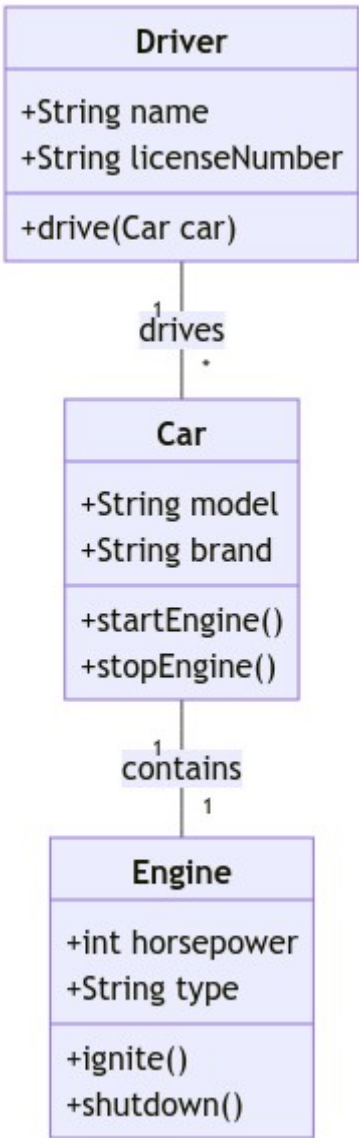
- ☐ [1, 4, 9, 16, 25]
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What will be the output of the code?

```
def calculate_sum(a, b=5):  
    return a + b  
  
result = calculate_sum(10)  
print(result)
```

- ☐ 10
- ☐ 15
- ☐ 5
- ☐ Error

What type of relationship exists between the Car and Engine classes in the diagram?



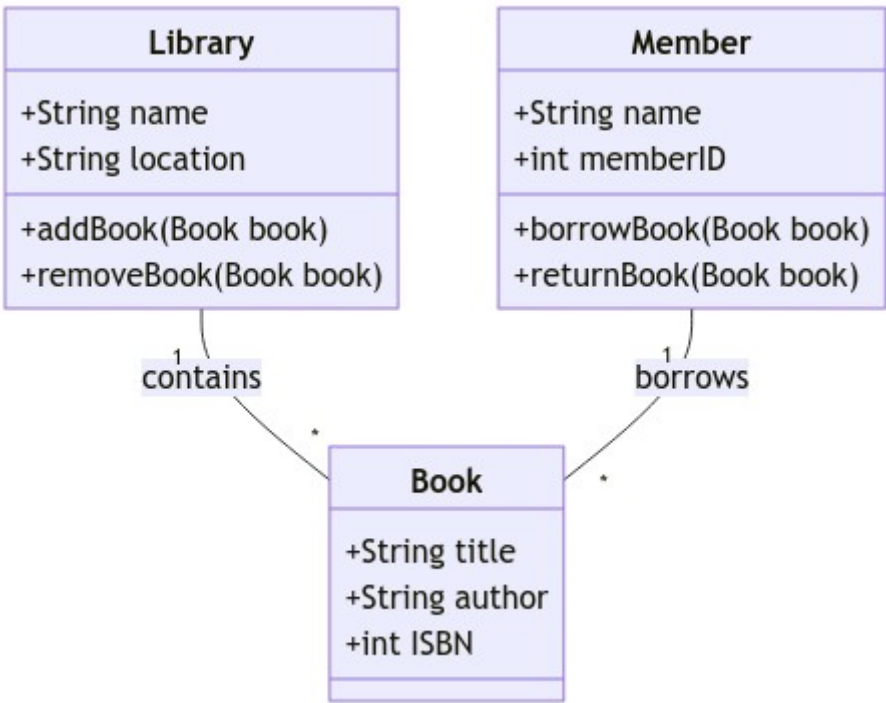
- ☐ Inheritance
- ☐ Aggregation
- ☐ Composition
- ☐ Association

What will be the output of the code?

```
def filter_odd_numbers(numbers):  
    return [num for num in numbers if num % 2 != 0]  
  
nums = [2, 3, 4, 5, 6]  
filtered = filter_odd_numbers(nums)  
print(filtered)
```

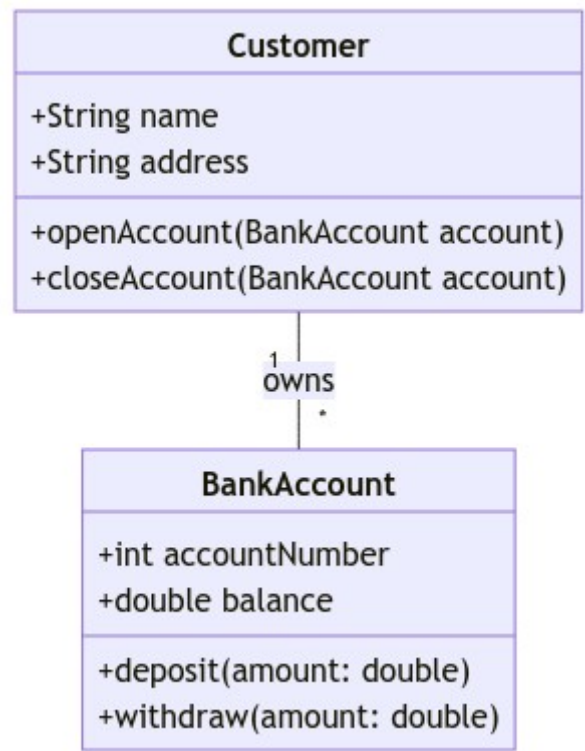
- ☐ [2, 4, 6]
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What type of relationship exists between the Library and Book classes in the diagram?



- ☐ Inheritance
- ☐ Aggregation
- ☐ Composition
- ☐ Association

What type of relationship is shown between the Customer and BankAccount classes?



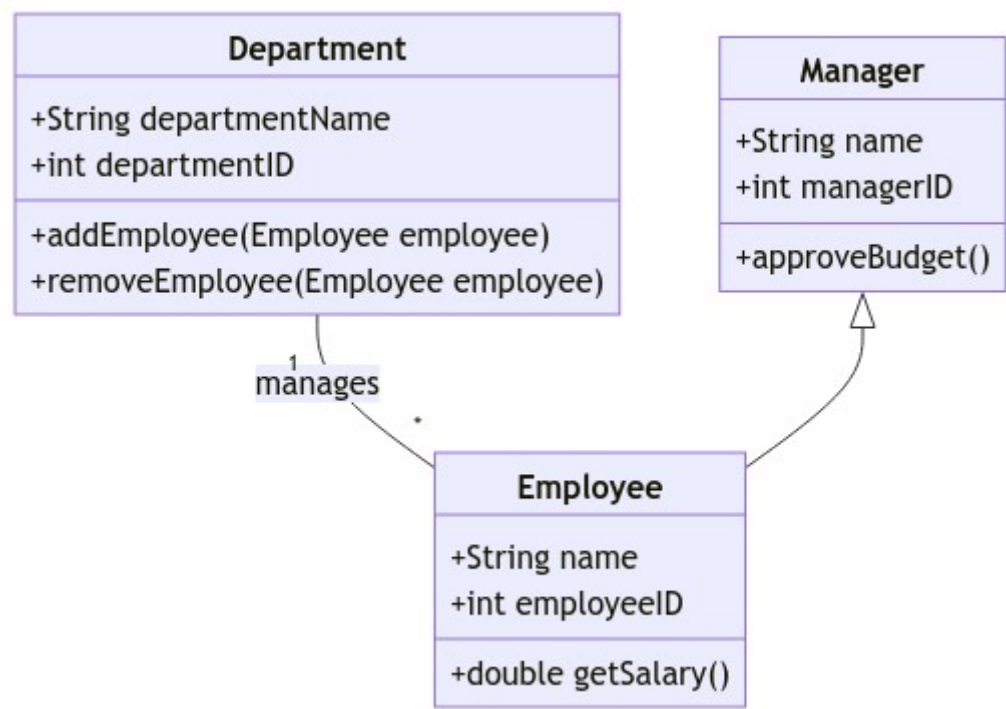
- ☐ Inheritance
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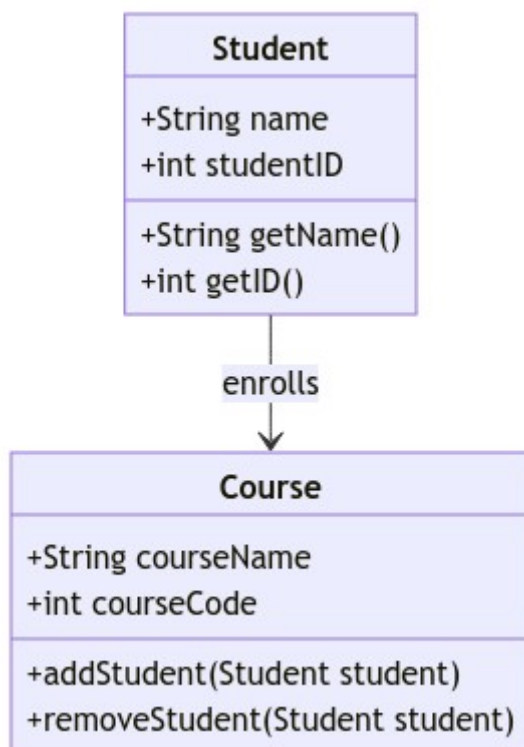
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What is the relationship between the Manager and Employee classes in the diagram?



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    if value is not None:
        lst.append(value)
    return lst

my_list = [1, 2, 3]
result = append_value(my_list, 4)
print(result)
```

- ☐ [1, 2, 3]
- ☐ [1, 2, 3, 4]
- ☐ [4]
- ☐ [1, 2, 3, None]

Controle N3

2QQeJ5u0

What will be the output of the code?

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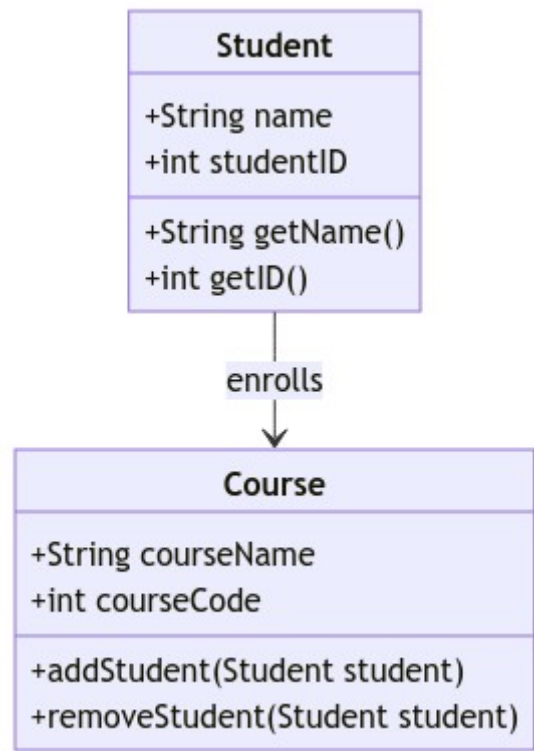
yHT7UDhI

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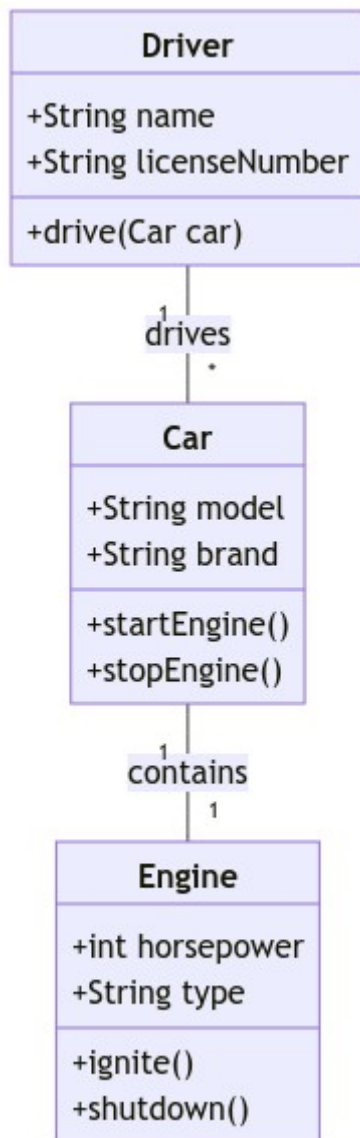
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What type of relationship exists between the Car and Engine classes in the diagram?



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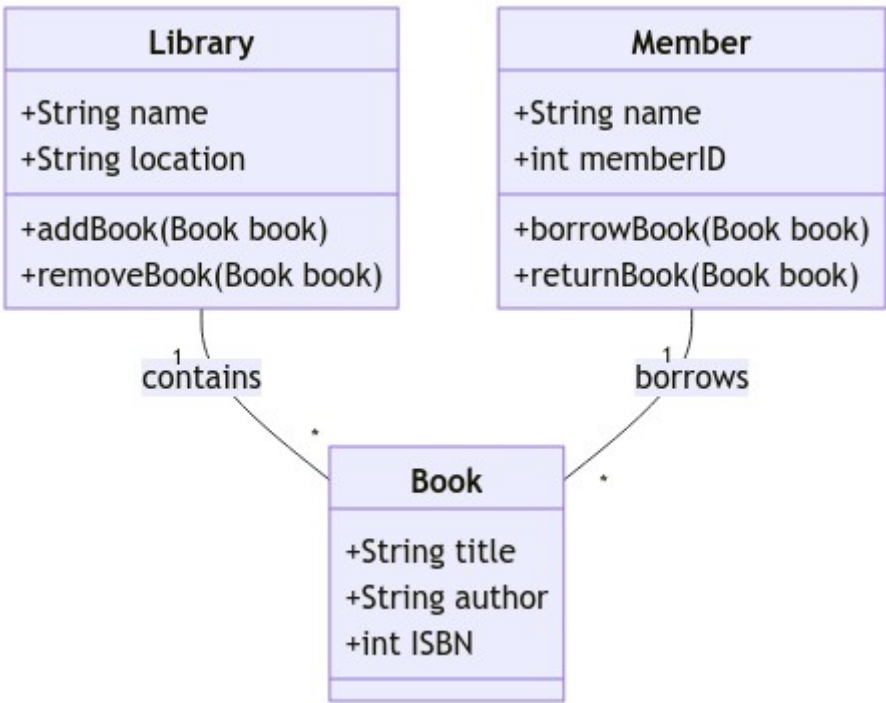
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What type of relationship exists between the Library and Book classes in the diagram?



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liLilloV

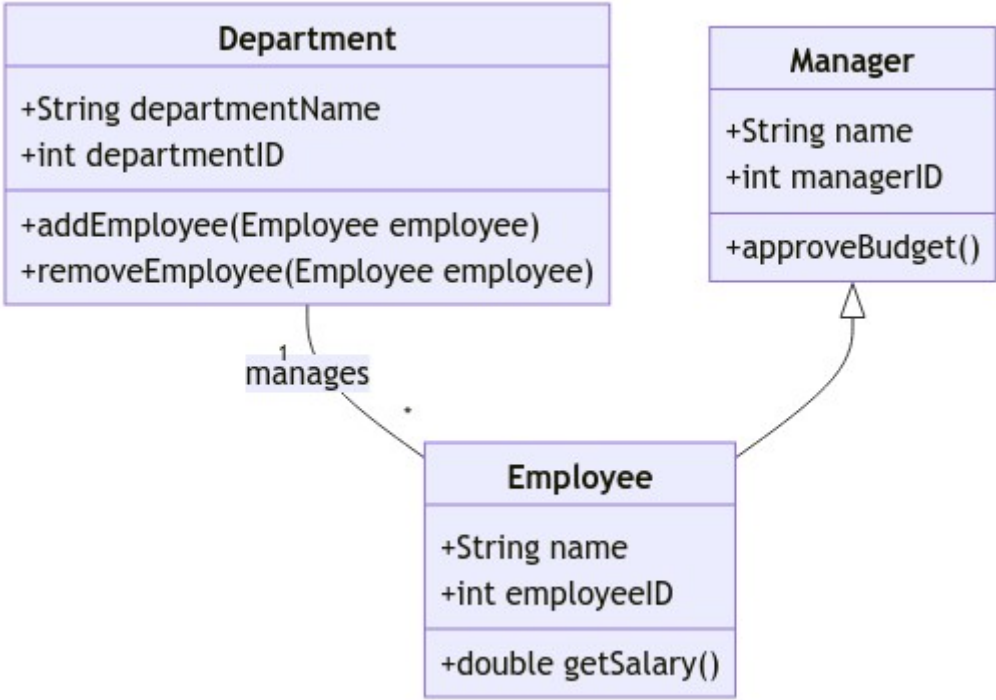
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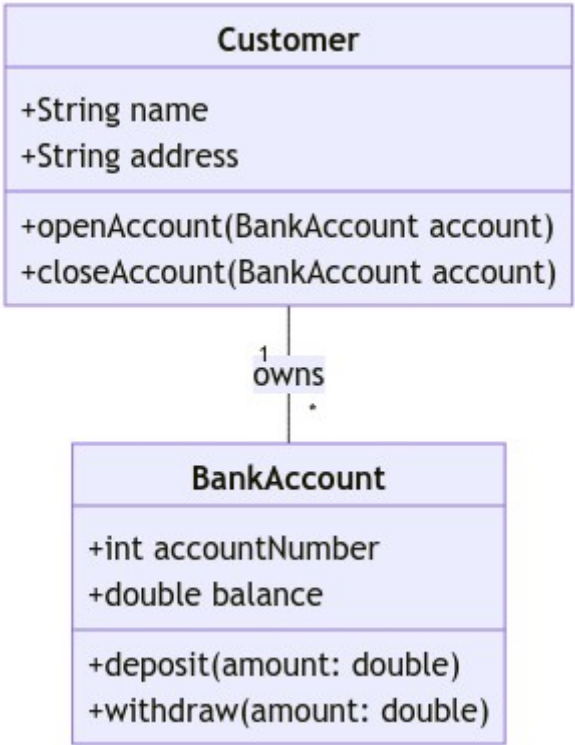
ZO8zvWTK

What is the relationship between the Manager and Employee classes in the diagram?



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- ☐ Aggregation
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- ☐ Association

What type of relationship is shown between the Customer and BankAccount classes?



- ☐ Inheritance
- ☐ Aggregation
- ☐ Composition
- ☐ Association