7. Inheritance

A, B and C are classes

A is a super class. B is a sub class of A. C is a sub class of B.

Create three methods in each class, 2 methods are specific to each class and third method (override method) should be in all three Classes A, B and C

Create a class with main method. Create an object for each class A, B and C in main method and call every method of each class using its own object/instance.

Call an overridden method with super class reference to B and C class's objects

Runtime Polymorphism with Data Members/Instance variables, Repeat the above process only for data members

main.py Shell

```python
#Inheritance program...
class A:
    def __init__(self, name):
        self.name = name
        self.age = 30
    def print_name(self):
        print("My name is", self.name)
    def greet(self):
        print("Hello, I am", self.name)
class B(A):
    def __init__(self, name, age):
        super().__init__(name)
        self.age = age
    def print_age(self):
        print("I am", self.age, "years
            old")
class C(B):
    def __init__(self, name, age,
        address):
        super().__init__(name, age)
        self.address = address
    def print_address(self):
        print("I live at", self.address
            )
```

```python
def main():
    a = A("Alice")
    b = B("Bob", 40)
    c = C("Carol", 25, "123 Main
        Street")

    a.print_name()
    a.greet()

    b.print_name()
    b.greet()
    b.print_age()

    c.print_name()
    c.greet()
    c.print_age()
    c.print_address()
if __name__ == "__main__":
    main()

```

Run


```
My name is Alice
Hello, I am Alice
My name is Bob
Hello, I am Bob
I am 40 years old
My name is Carol
Hello, I am Carol
I am 25 years old
I live at 123 Main Street
> 
```