# Python Examples: super() in Single Inheritance

## 1. Order and OnlineOrder

class Order:  
 def \_\_init\_\_(self, order\_id):  
 self.order\_id = order\_id  
  
 def process\_payment(self):  
 print(f"Processing payment for Order #{self.order\_id}")  
  
class OnlineOrder(Order):  
 def \_\_init\_\_(self, order\_id, email):  
 super().\_\_init\_\_(order\_id)  
 self.email = email  
  
 def process\_payment(self):  
 super().process\_payment()  
 print(f"Sending confirmation email to {self.email}")  
  
order = OnlineOrder(101, "customer@example.com")  
order.process\_payment()

## 2. Employee and Manager

class Employee:  
 def \_\_init\_\_(self, name, salary):  
 self.name = name  
 self.salary = salary  
  
 def display(self):  
 print(f"Name: {self.name}, Salary: ₹{self.salary}")  
  
class Manager(Employee):  
 def \_\_init\_\_(self, name, salary, department):  
 super().\_\_init\_\_(name, salary)  
 self.department = department  
  
 def display(self):  
 super().display()  
 print(f"Department: {self.department}")  
  
m = Manager("Shaik", 90000, "IT")  
m.display()

## 3. Vehicle and Car

class Vehicle:  
 def start(self):  
 print("Vehicle started")  
  
class Car(Vehicle):  
 def start(self):  
 super().start()  
 print("Car is ready to go")  
  
c = Car()  
c.start()

## 4. User Login System

class User:  
 def \_\_init\_\_(self, username):  
 self.username = username  
  
 def login(self):  
 print(f"{self.username} logged in")  
  
class Admin(User):  
 def login(self):  
 super().login()  
 print(f"{self.username} has admin privileges")  
  
a = Admin("admin\_user")  
a.login()

## 5. Shape and Circle

class Shape:  
 def \_\_init\_\_(self):  
 print("This is a shape")  
  
 def area(self):  
 print("Area formula not defined")  
  
class Circle(Shape):  
 def \_\_init\_\_(self, radius):  
 super().\_\_init\_\_()  
 self.radius = radius  
  
 def area(self):  
 super().area()  
 print("Circle Area:", 3.14 \* self.radius \* self.radius)  
  
c = Circle(5)  
c.area()

## 6. Person and Student

class Person:  
 def \_\_init\_\_(self, name):  
 self.name = name  
  
 def show(self):  
 print(f"Name: {self.name}")  
  
class Student(Person):  
 def \_\_init\_\_(self, name, grade):  
 super().\_\_init\_\_(name)  
 self.grade = grade  
  
 def show(self):  
 super().show()  
 print(f"Grade: {self.grade}")  
  
s = Student("Ali", "A")  
s.show()

## 7. BankAccount and SavingsAccount

class BankAccount:  
 def \_\_init\_\_(self, balance):  
 self.balance = balance  
  
 def show\_balance(self):  
 print(f"Balance: ₹{self.balance}")  
  
class SavingsAccount(BankAccount):  
 def \_\_init\_\_(self, balance, interest):  
 super().\_\_init\_\_(balance)  
 self.interest = interest  
  
 def show\_balance(self):  
 super().show\_balance()  
 print(f"Interest Rate: {self.interest}%")  
  
acc = SavingsAccount(10000, 5)  
acc.show\_balance()

## 8. Product and ElectronicProduct

class Product:  
 def \_\_init\_\_(self, name):  
 self.name = name  
  
 def details(self):  
 print(f"Product: {self.name}")  
  
class ElectronicProduct(Product):  
 def \_\_init\_\_(self, name, warranty):  
 super().\_\_init\_\_(name)  
 self.warranty = warranty  
  
 def details(self):  
 super().details()  
 print(f"Warranty: {self.warranty} years")  
  
p = ElectronicProduct("Laptop", 2)  
p.details()

## 9. Animal and Dog

class Animal:  
 def sound(self):  
 print("Animal sound")  
  
class Dog(Animal):  
 def sound(self):  
 super().sound()  
 print("Dog barks")  
  
d = Dog()  
d.sound()

## 10. Book and EBook

class Book:  
 def \_\_init\_\_(self, title):  
 self.title = title  
  
 def show(self):  
 print(f"Title: {self.title}")  
  
class EBook(Book):  
 def \_\_init\_\_(self, title, file\_size):  
 super().\_\_init\_\_(title)  
 self.file\_size = file\_size  
  
 def show(self):  
 super().show()  
 print(f"File Size: {self.file\_size} MB")  
  
eb = EBook("Python Guide", 5)  
eb.show()