

MINI E-COMMERCE SYSTEM USING PYTHON OOPS

CODE:

```
class Product:
```

```
    def __init__(self, product_id, name, price):
```

```
        self.__product_id = product_id
```

```
        self.__name = name
```

```
        self.__price = price
```

```
    def get_product_id(self):
```

```
        return self.__product_id
```

```
    def get_name(self):
```

```
        return self.__name
```

```
    def get_price(self):
```

```
        return self.__price
```

```
    def set_price(self, price):
```

```
        if price > 0:
```

```
            self.__price = price
```

```
        else:
```

```
            print("Invalid price. Must be greater than zero.")
```

```
    def apply_discount(self):
```

```
        return self.__price
```

```
    def __str__(self):
```

```
        return f"Product ID: {self.__product_id}, Name: {self.__name}, Price: {self.__price:.2f}"
```

```
class Electronics(Product):
    def __init__(self, product_id, name, price, warranty_period):
        super().__init__(product_id, name, price)
        self.warranty_period = warranty_period

    def apply_discount(self):
        return self.get_price() * 0.9

    def __str__(self):
        return f"{super().__str__()}, Warranty Period: {self.warranty_period} years"

class Clothing(Product):
    def __init__(self, product_id, name, price, material):
        super().__init__(product_id, name, price)
        self.material = material

    def apply_discount(self):
        return self.get_price() * 0.8

    def __str__(self):
        return f"{super().__str__()}, Material: {self.material}"

if __name__ == "__main__":
    laptop = Electronics(101, "Laptop", 80000, 2)
    smartphone = Electronics(102, "Smartphone", 50000, 1)

    tshirt = Clothing(201, "T-Shirt", 1000, "Cotton")
    jacket = Clothing(202, "Jacket", 3000, "Leather")

    products = [laptop, smartphone, tshirt, jacket]
```

```
for product in products:

    print(product)

    print(f"Original Price: {product.get_price():.2f}")

    print(f"Discounted Price: {product.apply_discount():.2f}\n")
```

OUTPUT:

```
Product ID: 101, Name: Laptop, Price: 80000.00, Warranty Period: 2 years
Original Price: 80000.00
Discounted Price: 72000.00

Product ID: 102, Name: Smartphone, Price: 50000.00, Warranty Period: 1 years
Original Price: 50000.00
Discounted Price: 45000.00

Product ID: 201, Name: T-Shirt, Price: 1000.00, Material: Cotton
Original Price: 1000.00
Discounted Price: 800.00

Product ID: 202, Name: Jacket, Price: 3000.00, Material: Leather
Original Price: 3000.00
Discounted Price: 2400.00

Process finished with exit code 0
```