

EXERCISE: 13

DATE: 20.11.2020

AIM:

To write a Python program to implement the class diagram.

PROGRAM:

```
class Apparel:
```

```
    counter=100
```

```
    def __init__(self,price,item_type):
```

```
        Apparel.counter+=1
```

```
        self.__item_id=item_type[0]+str(Apparel.counter)
```

```
        self.__price=price
```

```
        self.__item_type=item_type
```

```
    def calculate_price(self):
```

```
        self.__price+=self.__price*0.05
```

```
    def get_item_id(self):
```

```
        return self.__item_id
```

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

```
        return self.__price
```

```
    def get_item_type(self):
```

```
        return self.__item_type
```

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

```
        self.__price=price
```

```
        return self.__price
```

```
class Cotton(Apparel):  
    def __init__(self,price,discount):  
        super().__init__(price,'Cotton')  
        self.__discount=discount  
  
    def calculate_price(self):  
        super().calculate_price()  
        price=self.get_price()  
        price-=price*(self.__discount/100)  
        price+=price*0.05  
        self.set_price(price)  
        return price  
  
    def get_discount(self):  
        return self.__discount
```

```
class Silk(Apparel):  
    def __init__(self,price):  
        super().__init__(price,'Silk')  
        self.__points=None  
  
    def calculate_price(self):  
        super().calculate_price()  
        if(self.get_price())>10000:  
            self.__points=10  
        else:  
            self.__points=3  
        return self.set_price(self.get_price()+(self.get_price()*0.1))
```

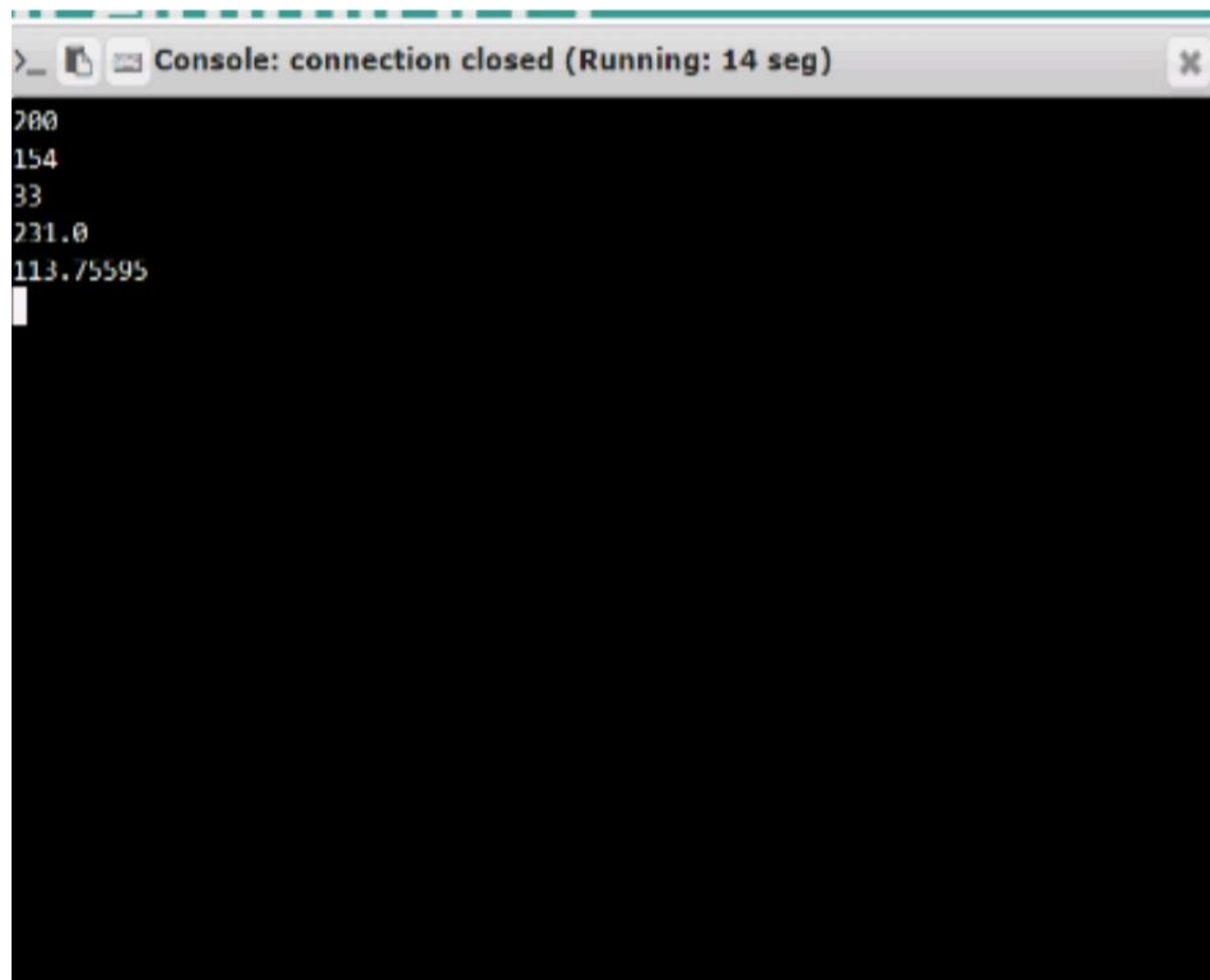
```
def get_points(self):  
    return self.__points
```

```
silk=int(input())  
cotton=int(input())  
discount=int(input())  
a=Silk(silk)  
print(a.calculate_price())  
b=Cotton(cotton,discount)  
print(b.calculate_price())
```

LINK:

<http://103.53.53.18/mod/vpl/forms/submissionview.php?id=328&userid=1690>

OUTPUT:



A screenshot of a console window with a title bar that reads "Console: connection closed (Running: 14 seg)". The console area is black with white text. The output consists of five lines: "280", "154", "33", "231.0", and "113.75595". A white cursor is visible on the line following the last output.

```
>_ Console: connection closed (Running: 14 seg) X
280
154
33
231.0
113.75595

```

RESULT:

The output for the given class diagram is obtained successfully.