**Exercise No :** 13 **Reg. No:** 1518102082

**Date :** 23-11-2020

**Aim:**

To write a python program to implement given class diagram for the Apparel shop.

**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=1693>

**Output:**

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**Result:**

Thus the code was executed successfully and the output is displayed.