

```

1  var customer= {Id:"", couponStatus:"default", payable:0, ...};
2  var coupon= {Id:"", expired:false...}
3  var availItems= [{name:"", price:0, count:0},...]
4  var selItem= {name:"", price:0, quantity:0};
5  ...
6  $document.ready(function() {
7      availItems=getItemsFromServer(url);
8      coupon= getCouponFromServer(url + customer.Id);
9      ...
10     $(".merchandise").click(addToCart);
11     $("#shopCart").click(viewCart);
12 });
13
14 function addToCart() {
15     var coupElem= $("#couponButt");
16     selItem= getItemInfo($(this));
17     for(var i=0; i<availItems.length; i++){
18         if(availItems[i].name == selItem.name)
19             availItems[i].count -= selItem.quantity;
20     }
21     var price= selItem.price * selItem.quantity;
22     if(!coupon.expired){
23         coupElem.removeClass(customer.couponStatus);
24         customer.couponStatus= coupon.Id + '-' + 'used';
25         price -= coupElem.data('value');
26         coupElem.addClass(customer.couponStatus);
27         coupon.expired=true;
28     }
29     customer.payable += price;
30 }
31
32 function viewCart(){
33     ...
34     if($("#couponButt").attr("class") == 'default' && customer.payable==0)
35         showMsg('Shopping cart is empty');
36     else
37         $(".div.shopContainer").append("<p>" + "Total purchase is: $" +
            customer.payable + "</p>");
38 }

```

(a)

```

1  @Test
2  public void testCase1(){
3      Select quantity = new Select(driver.findElement(By.
4          id("quantityDropDown")));
5      quantity.selectByIndex(1);
6      WebElement item = driver.findElements(By.css("merchandise"));
7      item.click();
8      WebElement cart = driver.findElements(By.id("shopCart"));
9      cart.click();
10     String expectedMsg = "Total purchase is: $70";
11     String msg=driver.findElements(By.cssSelector
12         ("div.shopContainer")).getText();
13     assertEquals(msg, expectedMsg);
14 }

```

(b)