Task1:

|  |  |
| --- | --- |
| TextUI | calls |
| TextUI | NA |
| MainMenu | NA |
| RouteChoice | DisplayInventory(), ItemMenu(), AddItemToCart(), DisplayCart(), CartItems(), RemoveItemFromCart(), Checkout(), ClearCart() |
| ItemMenu | NA |

|  |  |
| --- | --- |
| ShoppingCart | calls |
| ShoppingCart | NA |
| AddItem | get\_id(), IncreaseQuantity() |
| RemoveItem | get\_quantity(), DecreaseQuantity() |
| DisplayCart | NA |
| ClearCart | NA |
| get\_items() | NA |

|  |  |
| --- | --- |
| Item | calls |
| Item | NA |
| get\_id() | NA |
| get\_quantity() | NA |
| get\_cost() | NA |
| get\_type() | NA |
| IncreaseQuantity | NA |
| DecreaseQuantity | NA |
| ToString | NA |
| Clone | NA |
| operator<< | ToString() |

|  |  |
| --- | --- |
| Store | Calls |
| Store | Item(), ShoppingCart() |
| DisplayInventory | ToString() |
| Items | get\_quantity(), get\_id(), ToString() |
| CartItems | get\_quantity(), get\_id(), ToString() |
| AddItemToCart | get\_id(), Clone(), DecreaseQuantity() |
| RemoveItemFromCart | get\_id(), IncreaseQuantity(), get\_items() |
| DisplayCart | DisplayCart() |
| Checkout | get\_items(), get\_quantity(), get\_cost(), get\_type(), ClearCart() |
| ClearCart | ClearCart() |

Task2:

The clone method creates a new item object with the same exact id\_, type\_, cost\_, but with a quantity of 1. In order to add an item to a cart the same item needs to be recreated and added once.

Task3:

|  |  |
| --- | --- |
| Yes | No |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Trait | TextUI | ShoppingCart | Item | Store |
| Cohesive | It only performs as an interface and hands over any computation | Doesn’t incorporate outside objects | Does everything related to Item | It only performs the necessary actions |
| Complete | Seems to have all the necessary components | Seems to have all the necessary components | Seems to have all the necessary components | Doesn’t allow for multiple users |
| Clear | The multiple if statements in RouteChoice() make it a little confusing | All the operations are straightforward | All the operations are straightforward | A lot of the methods are named similar to other object methods |
| Convenient | Works well as a UI | Prints everything that’s necessary | Not necessarily since it can basically just be a struct | Prints everything that’s necessary |
| Consistent | Seems to be consistent | Seems to be consistent | Seems to be consistent | Seems to be consistent |