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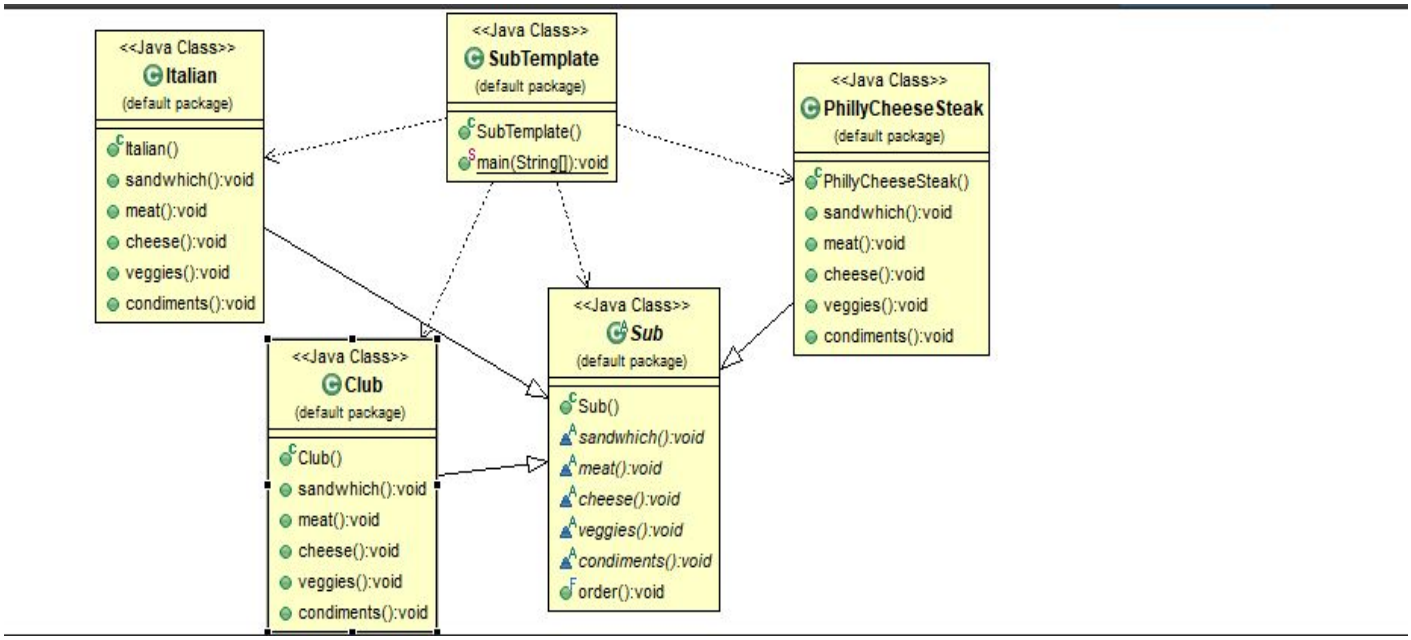
Course: CSCI 5335

UML Diagram:



Sub Template Pattern Abstract and 3 extensions:

```
public abstract class Sub {
 abstract void sandwich();
 abstract void meat();
 abstract void cheese();
 abstract void veggies();
 abstract void condiments();

 public final void order() {

  sandwich();

  meat();

  cheese();

  veggies();

  condiments();


 }

}
```

```
public class Italian extends Sub {

 public void sandwich() {
  System.out.println("Sub: Italian");
 }

 public void meat() {
  System.out.println("Meat(s): Ham, Pepperoni, Salami");
 }

 public void cheese() {
  System.out.println("Cheese: Provolone");
 }
```

```
 public void veggies() {
  System.out.println("Veggies: Lettuce, Tomatoes, Onion");
 }

 public void condiments() {
  System.out.println("Condiment: Mayo, Deli Mustard, Italian dressing");
 }
}
```

```
public class Club extends Sub {

 public void sandwich() {
  System.out.println("Sub: Club");
 }

 public void meat() {
  System.out.println("Meat(s): Ham, Roast, Bacon");
 }

 public void cheese() {
  System.out.println("Cheese: Monterey Jack");
 }

 public void veggies() {
  System.out.println("Veggies: Lettuce, Tomatoes, Onion");
 }

 public void condiments() {
  System.out.println("Condiments: Mayo, Deli Mustard, Ranch");
 }
}
```

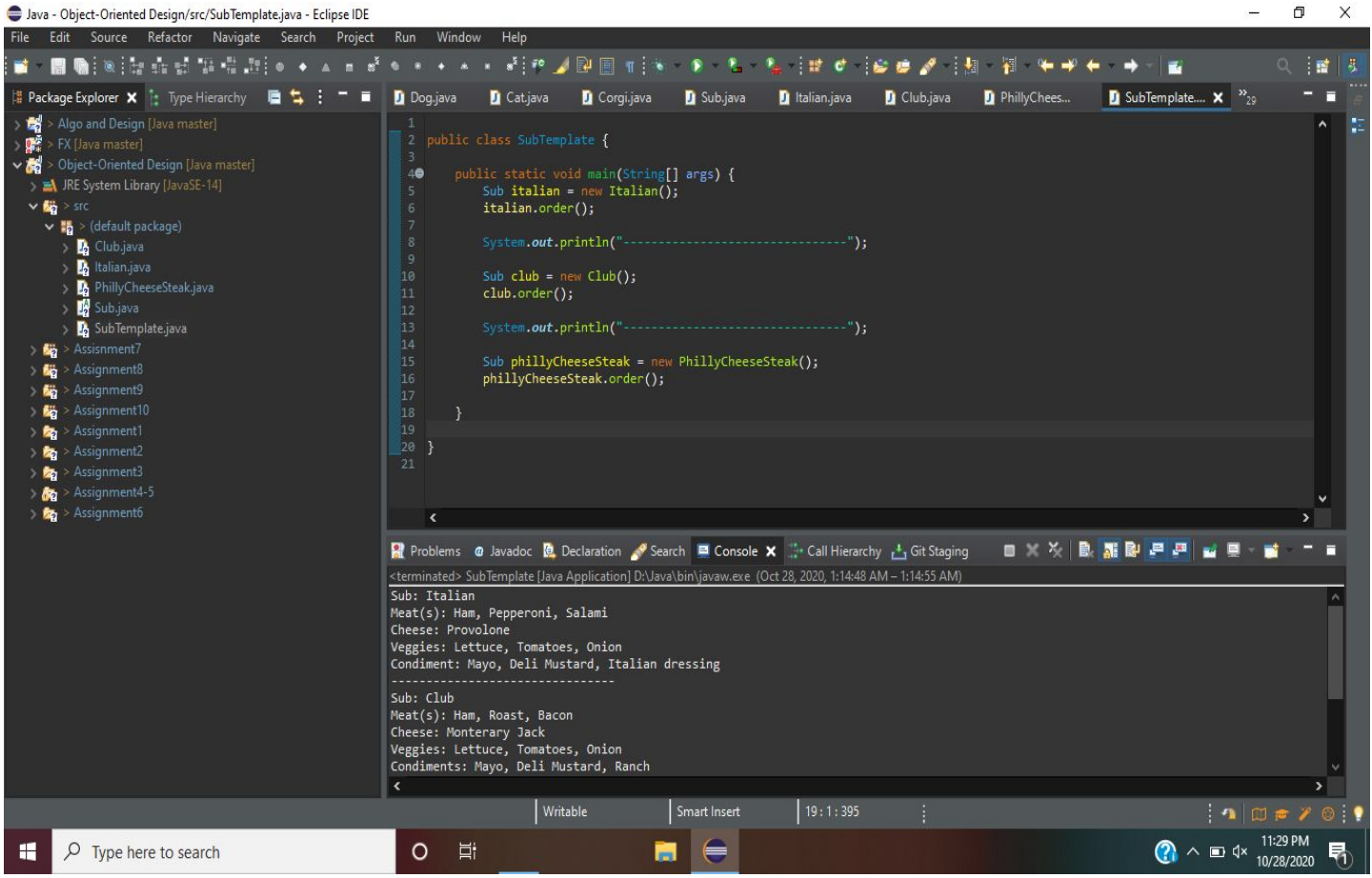
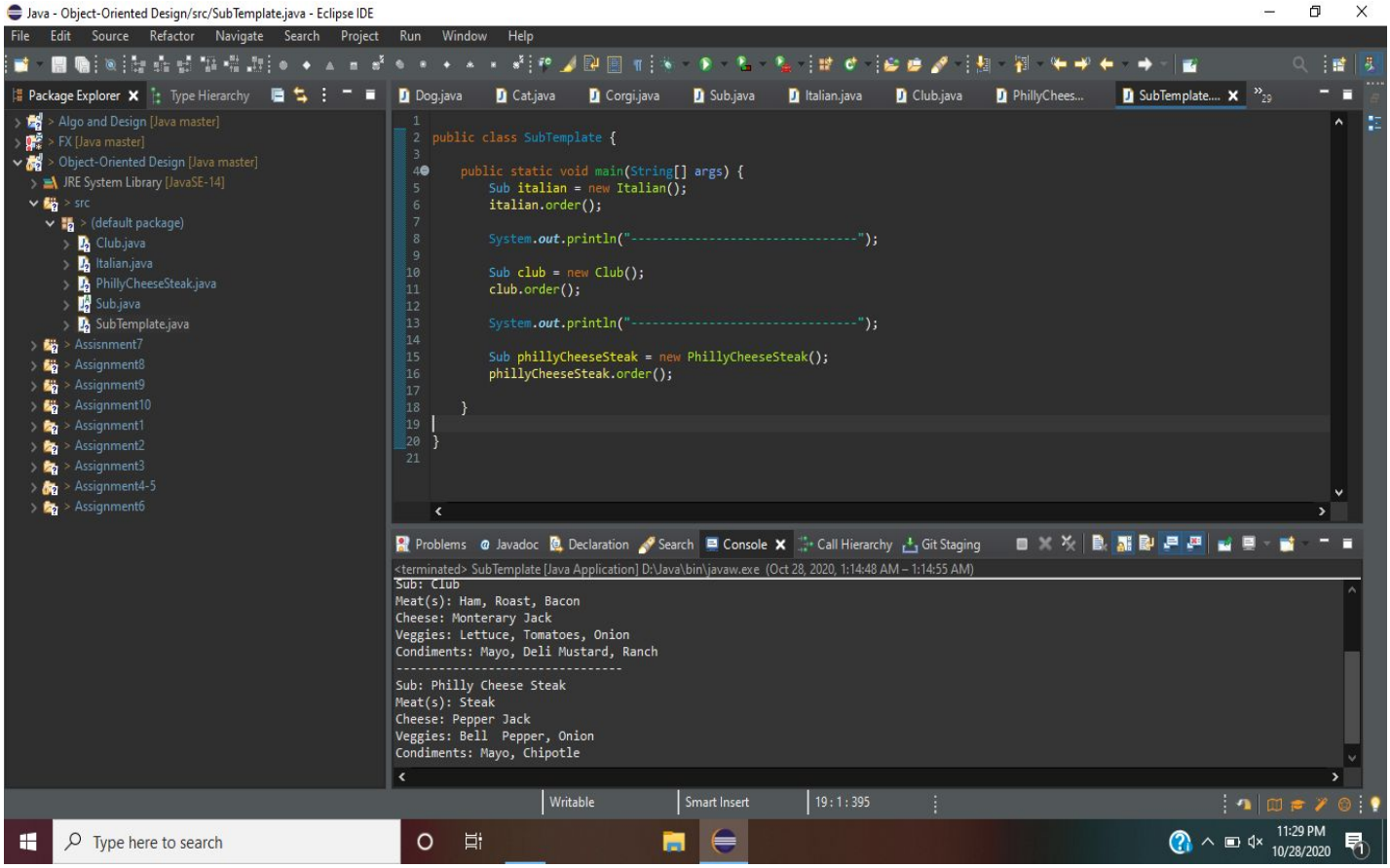
```
public class PhillyCheeseSteak extends Sub{

 public void sandwich() {
  System.out.println("Sub: Philly Cheese Steak");
 }

 public void meat() {
  System.out.println("Meat(s): Steak");
 }
```

```
 public void cheese() {
  System.out.println("Cheese: Pepper Jack");
 }

 public void veggies() {
  System.out.println("Veggies: Bell  Pepper, Onion");
 }

 public void condiments() {
  System.out.println("Condiments: Mayo, Chipotle");
 }
}
```

Test And Compile SubTemplate Class :

```
public class SubTemplate {
 public static void main(String[] args) {
  Sub italian = new Italian();
  italian.order();

  System.out.println("--------------------------------");

  Sub club = new Club();
  club.order();

  System.out.println("--------------------------------");

        Sub phillyCheeseSteak = new PhillyCheeseSteak();
  phillyCheeseSteak.order();
 }
}
```

Working Code #1:



Working Code #2