

Lab 11 Work Part B

Weather Forecast for a Day

1. What are the instance attributes, their data types and valid ranges?

The instance attributes are: high temperature, low temperature and skyCondition;

High temperature and low temperature are in the double format (Real Numbers) and they support both positive and negative values.

Letters or any characters are not supported.

SkyCondition is in a String format (Words).

Numbers are not supported.

2. What are instance methods needed, their arguments and return types?

// Default Constructor

```
Public Weather(){
```

```
    setHighTemperature(DEFAULT_TEMPERATURE);  
    setLowTemperature(DEFAULT_TEMPERATURE);  
    setCondition(DEFAULT_CONDITION);
```

```
}
```

```
public Weather(double newHighTemperature, double newLowTemperature, String newCondition){
```

```
    setHighTemperature(newHighTemperature);  
    setLowTemperature(newLowTemperature);  
    setCondition(newCondition);
```

```
}
```

//Accessors

```
Public double getHighTemperature(){
```

```
    return highTemperature;
```

```
}
```

```
public double getLowTemperature(){
```

```
    return lowTemperature;
```

```
}
```

```

Public String getCondition(){

    Return condition;

}

//Mutators

public static void setHighTemperature(double newHighTemperature){

    this.highTemperature = newHighTemperature;

}

public static void setLowTemperature(double newlowTemperature){

    this.lowTemperature = newlowTemperature;

}

public static void setCondition(String newCondition){

    this.condition = newCondition;

}.

//ToString Method

public String toString(){

    Return "HighTemperature: " + highTemperature + "LowTemperature: " + lowTemperature
    + "Condition: " + condition;

}

```

3. What are the class constants needed, their data type and value?

```

private static final String CONDITION1 = "sunny", CONDITION2 = "cloudy", CONDITION3 = "rainy",
CONDITION 4 = "snowy";

```

```

private static final double DEFAULT_TEMPERATURE=0;

```

4. What are the class attributes, their data types and valid ranges?

String array, DayForecast;

Object array, threeForecast;

Object array, 30DayInfo;

5. What are class methods needed, their arguments and return types?

We need a method to take the high temperature, low temperature and condition into an array. Take in two doubles and a string. We would need to convert the high temperature and low temperature to string to be able to store into an array.

We need a method to store these forecasts into a day array which is 3 in length to store the 3 forecasts. The argument will be the object from the weather class and returns an array.

Method to track the high temperature and one to track the low temperature. They take in double values. Check to see if it's high or low. They return a double.