

1. Create a data frame with the weather forecast using data provided by teacher not including today's date(ie. April 7th) as mentioned on image.

Code in R:

```
weather_data <- data.frame(  
  #Information for days between 4/8 to 4/21  
  Day = seq(as.Date("2024-04-08"), as.Date("2024-04-21"),  
  #Description (so types of weather occurring on days)  
  Des. = c("Sunny", "Sunny", "Partly Cloudy", "Partly Cloudy", "Mostly Sunny",  
    "Partly Cloudy", "Partly Cloudy", "Partly Cloudy", "Partly Cloudy",  
    "Partly Cloudy", "Mostly Cloudy", "AM showers", "Mostly Cloudy", "AM showers"),  
  #High/Low temps for each day  
  #Note: c() means to combine  
  High_Low = c("72/44", "74/45", "64/44", "61/40", "64/40", "68/44", "60/43", "63/43",  
    "63/44", "63/45", "61/44", "62/45", "62/45", "64/48"),  
  #Precipitation for each day  
  Preci. = c("10", "0", "10", "20", "0", "10", "20", "20", "20", "20", "20", "40", "20", "30"),  
  #Wind measures for each day  
  Wind = c("NNE 10 mph", "N 10 mph", "W 7 mph", "W 7 mph", "NE 8 mph", "N 6 mph",  
    "SW 6mph",  
    "W 6 mph", "ENE 7 mph", "SSW 7 mph", "SW 8 mph", "SW 8 mph", "SW 7 mph",  
    "WSW 8 mph"),  
  #Humidity  
  Humi. = c("52", "49", "66", "56", "39", "38", "53", "58", "54", "60", "64", "63", "64", "63"))  
  
  #Using mapping here for the frame to create the code  
  des_mapping <- c("Sunny", "Partly Cloudy", "Mostly Sunny", "Mostly Cloudy", "AM  
    showers")  
  weather_data$Des_Code <- match(weather_data$Des, des_mapping)  
  
  # Now in order to have each day have its specific components we name out the  
  levels and class  
  attr(weather_data$Des_Code, "levels") <- des_mapping  
  attr(weather_data$Des_Code, "class") <-  
  
  # Shows the data frame with all components  
  print(weather_data)
```

RESULTS: DATA FRAME

Day	Des.	High/Low	Preci.	Wind	Humi.
4/8	Sunny	72/44	10	NNE 10 mph	52
4/9	Sunny	74/45	0	N 10 mph	49
4/10	Partly Cloudy	64/44	10	W 7 mph	66
4/11	Partly Cloudy	61/40	20	W 7 mph	56
4/12	Mostly Sunny	64/40	0	NE 8 mph	39
4/13	Partly Cloudy	68/44	10	N 6 mph	38
4/14	Partly Cloudy	60/43	20	SW 6mph	53
4/15	Partly Cloudy	63/43	20	W 6 mph	58
4/16	Partly Cloudy	63/44	20	ENE 7 mph	54
4/17	Partly Cloudy	63/45	20	SSW 7 mph	60
4/18	Mostly Cloudy	61/44	20	SW 8 mph	64
4/19	AM showers	62/45	40	SW 8 mph	63
4/20	Mostly Cloudy	62/45	20	SW 7 mph	64
4/21	AM showers	64/48	30	WSW 8 mph	63