**Joe Herrera**

**CS117**

**10/26/2016**

**LAB 3**

**Lab 3 – Using Python List Containers**

**Code:**

*'''  
Purpose: Using Python List Containers  
Programmer: Joe Herrera  
CS117 Section 1610 CS13-01  
Lab 3  
'''*hourlyTemps = [] *# creating empty list container for temperatures  
  
# creating list container to store hours of day 00:00 through 23:00*times = [**'00:00'**, **'01:00'**, **'02:00'**, **'03:00'**, **'04:00'**, **'05:00'**,  
 **'06:00'**, **'07:00'**, **'08:00'**, **'09:00'**, **'10:00'**, **'11:00'**,  
 **'12:00'**, **'13:00'**, **'14:00'**, **'15:00'**, **'16:00'**, **'17:00'**,  
 **'18:00'**, **'19:00'**, **'20:00'**, **'21:00'**, **'22:00'**, **'23:00'**]  
  
*# function to prompt user and pass entered temperatures into hourlyTemps list container***def** getTemperatures(hourly):  
 *# beginning of for loop* **for** i **in** times:  
 t = -100  
 *# validation nested loop* **while** t < -50 **or** t > 130:  
 t = float(input(**'Please enter a temperature between -50 +130 for hour {}: '**.format(i)))  
  
 hourly.append(t)  
 *# end of for loop  
  
# main function for displaying and calculating min, max, and avg temps***def** main():  
 getTemperatures(hourlyTemps)  
  
 print(**"\nHour\tTemperature"**)  
 **for** i **in** range(0,len(times)):  
 print(**"{}\t\t{}"**.format(times[i],hourlyTemps[i]))  
  
 *# Find high temp* high = max(hourlyTemps)  
 print(**"\nHigh Temperature is {:.1f} degrees."**.format(high))  
  
 *# Find low temp* low = min(hourlyTemps)  
 print(**"Low Temperature is {:.1f} degrees."**.format(low))  
  
 *# Find avg temp* avg = sum(hourlyTemps) / len(times)  
 print(**"Average Temperature is {:.1f} degrees."**.format(avg))  
  
main()

**Execution:**

**Please enter a temperature between -50 +130 for hour 00:00: -100**

**Please enter a temperature between -50 +130 for hour 00:00: 200**

**Please enter a temperature between -50 +130 for hour 00:00: 50**

**Please enter a temperature between -50 +130 for hour 01:00: 0**

**Please enter a temperature between -50 +130 for hour 02:00: 55**

**Please enter a temperature between -50 +130 for hour 03:00: 65**

**Please enter a temperature between -50 +130 for hour 04:00: 78**

**Please enter a temperature between -50 +130 for hour 05:00: 90**

**Please enter a temperature between -50 +130 for hour 06:00: 150**

**Please enter a temperature between -50 +130 for hour 06:00: -100**

**Please enter a temperature between -50 +130 for hour 06:00: 32**

**Please enter a temperature between -50 +130 for hour 07:00: 98**

**Please enter a temperature between -50 +130 for hour 08:00: 115**

**Please enter a temperature between -50 +130 for hour 09:00: 120**

**Please enter a temperature between -50 +130 for hour 10:00: 45**

**Please enter a temperature between -50 +130 for hour 11:00: 33**

**Please enter a temperature between -50 +130 for hour 12:00: 19**

**Please enter a temperature between -50 +130 for hour 13:00: 22**

**Please enter a temperature between -50 +130 for hour 14:00: -2**

**Please enter a temperature between -50 +130 for hour 15:00: 4**

**Please enter a temperature between -50 +130 for hour 16:00: 0**

**Please enter a temperature between -50 +130 for hour 17:00: 9**

**Please enter a temperature between -50 +130 for hour 18:00: 19**

**Please enter a temperature between -50 +130 for hour 19:00: 22**

**Please enter a temperature between -50 +130 for hour 20:00: 51**

**Please enter a temperature between -50 +130 for hour 21:00: 68**

**Please enter a temperature between -50 +130 for hour 22:00: 62**

**Please enter a temperature between -50 +130 for hour 23:00: 64**

**Hour Temperature**

**00:00 50.0**

**01:00 0.0**

**02:00 55.0**

**03:00 65.0**

**04:00 78.0**

**05:00 90.0**

**06:00 32.0**

**07:00 98.0**

**08:00 115.0**

**09:00 120.0**

**10:00 45.0**

**11:00 33.0**

**12:00 19.0**

**13:00 22.0**

**14:00 -2.0**

**15:00 4.0**

**16:00 0.0**

**17:00 9.0**

**18:00 19.0**

**19:00 22.0**

**20:00 51.0**

**21:00 68.0**

**22:00 62.0**

**23:00 64.0**

**High Temperature is 120.0 degrees.**

**Low Temperature is -2.0 degrees.**

**Average Temperature is 46.6 degrees.**

**Process finished with exit code 0**

**Please enter a temperature between -50 +130 for hour 00:00: 500**

**Please enter a temperature between -50 +130 for hour 00:00: -500**

**Please enter a temperature between -50 +130 for hour 00:00: 5**

**Please enter a temperature between -50 +130 for hour 01:00: 8**

**Please enter a temperature between -50 +130 for hour 02:00: 20**

**Please enter a temperature between -50 +130 for hour 03:00: -65**

**Please enter a temperature between -50 +130 for hour 03:00: -50**

**Please enter a temperature between -50 +130 for hour 04:00: 130**

**Please enter a temperature between -50 +130 for hour 05:00: 131**

**Please enter a temperature between -50 +130 for hour 05:00: -49**

**Please enter a temperature between -50 +130 for hour 06:00: -51**

**Please enter a temperature between -50 +130 for hour 06:00: 5**

**Please enter a temperature between -50 +130 for hour 07:00: 8**

**Please enter a temperature between -50 +130 for hour 08:00: 110**

**Please enter a temperature between -50 +130 for hour 09:00: 100**

**Please enter a temperature between -50 +130 for hour 10:00: 95**

**Please enter a temperature between -50 +130 for hour 11:00: 80**

**Please enter a temperature between -50 +130 for hour 12:00: 70**

**Please enter a temperature between -50 +130 for hour 13:00: 65**

**Please enter a temperature between -50 +130 for hour 14:00: 50**

**Please enter a temperature between -50 +130 for hour 15:00: 51**

**Please enter a temperature between -50 +130 for hour 16:00: 40**

**Please enter a temperature between -50 +130 for hour 17:00: 42**

**Please enter a temperature between -50 +130 for hour 18:00: 44**

**Please enter a temperature between -50 +130 for hour 19:00: 31**

**Please enter a temperature between -50 +130 for hour 20:00: 35**

**Please enter a temperature between -50 +130 for hour 21:00: 40**

**Please enter a temperature between -50 +130 for hour 22:00: 30**

**Please enter a temperature between -50 +130 for hour 23:00: 49**

**Hour Temperature**

**00:00 5.0**

**01:00 8.0**

**02:00 20.0**

**03:00 -50.0**

**04:00 130.0**

**05:00 -49.0**

**06:00 5.0**

**07:00 8.0**

**08:00 110.0**

**09:00 100.0**

**10:00 95.0**

**11:00 80.0**

**12:00 70.0**

**13:00 65.0**

**14:00 50.0**

**15:00 51.0**

**16:00 40.0**

**17:00 42.0**

**18:00 44.0**

**19:00 31.0**

**20:00 35.0**

**21:00 40.0**

**22:00 30.0**

**23:00 49.0**

**High Temperature is 130.0 degrees.**

**Low Temperature is -50.0 degrees.**

**Average Temperature is 42.0 degrees.**

**Process finished with exit code 0**