

```
import math
```

```
def calculate_heat_index(temp_c,  
humidity):
```

```
    """
```

Calculates a simplified heat index (feels-like temperature).

This demonstrates logic and mathematical operations in Python.

```
    """
```

```
    if temp_c < 20:
```

```
        return temp_c # Heat index is  
generally not calculated for cold temps
```

```
    # Simplified formula for demonstration
```

```
    heat_index = temp_c + (0.55 * (1 -  
(humidity / 100)) * (temp_c - 14.5))
```

```
    return round(heat_index, 2)
```

```
def analyze_weather_data(data_list):
```

```
    """
```

Processes a list of daily weather dictionaries.

Demonstrates data filtering, loops, and error handling.

```
"""
```

```
if not data_list:
    raise ValueError("The data list cannot
be empty.")
```

```
results = []
```

```
for entry in data_list:
```

```
    try:
```

```
        city = entry.get("city", "Unknown")
```

```
        temp = entry["temp"]
```

```
        humidity = entry["humidity"]
```

```
        feels_like =
```

```
        calculate_heat_index(temp, humidity)
```

```
        summary = {
```

```
        "city": city,
        "actual_temp": f"{temp}°C",
        "feels_like": f"{feels_like}°C",
        "status": "High Heat" if feels_like >
30 else "Moderate"
    }
    results.append(summary)
```

```
except KeyError as e:
    print(f"Skipping invalid entry:
Missing field {e}")
except Exception as e:
    print(f"An unexpected error
occurred: {e}")
```

```
return results
```

```
# Example Usage
```

```
if __name__ == "__main__":
    sample_weather = [
        {"city": "Lagos", "temp": 32, "humidity":
```

```
80},  
    {"city": "New York", "temp": 22,  
"humidity": 50},  
    {"city": "London", "temp": 15,  
"humidity": 60}  
]
```

```
print("--- Weather Analysis Report ---")  
processed_data =  
analyze_weather_data(sample_weather)  
for report in processed_data:  
    print(report)
```