CS102 - Final Project Proposal

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CLASS: CS102

ASSIGNMENT: Final Project - Proposal

INSTRUCTOR: Chris Harris

SUBMISSION DATE: 11/15/2018

DESCRIPTION:

Proposal for our final project.

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a. Brief Write-Up

The purpose of this project is to create a weather application, using the OpenWeatherMap API (https://openweathermap.org/api).

Based on user input, this app will retrieve and display current weather data, or a five day forecast. The user will then be

invite to save the output to a text file.

INPUTS

Option of current or 5 day forecast - Ex. Current

Location - Ex. London, UK

b. Which topic, minimum of 3

1. Nested loops

2. Writing to files

3. Arrays

4. Recursion for formatting

c. Pseudocode

FinalProjectWeatherApp:

  main()

    // Welcome user

    print("Welcome")

    // Inititalize Scanner

    _scanner = new Scanner()

    // User Interface Loop

    while(true):

      // Display options and prompt for input

      while(true):

        Print("Current weather, 5 day forcast, or exit")

        option = input()

        if(good input):

          break;

      // If current weather or forcast prompt for location

      Prompt for location

      location = input()

      // Format and send http request

```
url = api/ + option
params = location
response = http.get(url,params)


// Parse response
// If "Current Weather" response
if(option = "current")
   results[] = parse(response)


   // Format and print results
   for(result in results[])
      print(result)


   // Ask the user if they would like to print results to a file
   // if the user does wish to print to a file
   if yes:
      for(result in results[])
         file.print(result)


// If "Weather Forecast" response
else if(option = "forecast")
   results[][] = parse(response)


   // Format and print results
   for(result in results[][])
      print(result)


   // Ask the user if they would like to print results to a file
   // if the user does wish to print to a file
```

```
        if yes:

            for(result in results[][])

                file.print(result)


// Exit option
else if(option = "exit")

    System.exit(0)


// Bad input
else

    print("Bad input, please try again.")
```