**MaxMinTemp Program**

**Problem Statement:** A program is required to prompt the user for the maximum

and minimum temperature readings on a particular day, accept those

readings as integers, and calculate and display to the screen the average

temperature, calculated by (maximum temperature + minimum

temperature/2).

**Defining Diagram (IPO Chart):**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| maxTemp  minTemp | Prompt user for temperature  Get temperature  Calculate average temperature  Display average temperature | maxTemp  minTemp  avgTemp |

**Solution Algorithm (Pseudocode):**

**MaxMinTemp**

DECLARE maxTemp, minTemp and avgTemp variables

PROMPT user for maxTemp

GET maxTemp

PROMPT user for minTemp

GET minTemp

CALCULATE avgTemp

DSIPLAY the maxTemp

DISPLAY the minTemp

DISPLAY calculated avgTemp

**END**

**Desk Checking:**

**Choose Data Set:**

|  |  |  |
| --- | --- | --- |
| **Identifiers** | **First Data Set** | **Second Data Set** |
| maxTemp | 30 | 40 |
| minTemp | 10 | 20 |

**Expected Results Table:**

|  |  |  |
| --- | --- | --- |
|  | **First Data Set** | **Second Data Set** |
| avgTemp | 20 | 30 |

**Algorithm Walkthrough:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Statements** | **maxTemp** | **minTemp** | **avgTemp** |
| **First Pass** | | | |
| Prompt – Get Identifiers | 30 | 10 |  |
| Calculate avgTemp |  |  | 20 |
| Output Displayed correctly |  |  | Yes – matches expected results |
| **Second Pass** | | | |
| Prompt – Get Identifiers | 40 | 20 |  |
| Calculate avgTemp |  |  | 30 |
| Output Displayed correctly |  |  | Yes – matches expected results |

**Next Steps are to:** Code the application in Dev C++, Compile, Debug if necessary, Re-compile if necessary and Run.