**CSC 1101 – Problem Solving and Programming Laboratory**

**Lab 18 – Trevor Trusty**

**25 points – Due April 1 (joke), 11pm**

**a)** Save this document with your name and the homework number somewhere in the file name.

**b)** Type/paste your answers into the document.

**c)** Submit this document and your .cpp file(s) to the Canvas item where you downloaded this document. Do not submit a zip file but individually attach your files.

You’ve been hired by *Tumbling Tigers* to write a C++ console application that tracks scoring for Detroit Tiger baseball games. The season opener is today and they are playing the Toronto Blue Jays. A normal game is nine innings but this one will only last five innings. Declare two integer arrays of the same size to hold the scores for each team by inning. Note that for this application, it is easier to set up the loops if the score in an inning matches its array index. Declare the arrays to hold six values each but simply ignore the zero (first) index in both arrays. Prompt the user for the number of runs scored by each team in each inning, and store the values in the correct arrays and at the correct spots. After getting the runs scored for an inning, print the box score through the number of innings played so far. A box score shows the runs scored by each team in each inning and the overall score. After the five innings, determine and print which inning each team scored the most runs. A sample run is shown on the next page.

Create and use the following functions:

● **int** **teamScore(int runs[], int inning)** loops through a team array and returns the runs scored through the given inning.

● **int** **teamHigh(int runs[])** loops through a team array and returns the inning in which the most runs were scored by that team. If there is more than inning with a high, then return the first one.

● **void printBoxScore(int runsUs[], int runsThem[], int inning)** prints a box score message, an underline, column headings, scores for the Tigers, and then scores for the Blue Jays.

● **int main()** declares the two arrays, and loops for each inning to prompt for and get from the user the runs scored in an inning, and to print the box score.

Welcome to Tumbling Tigers

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Inning 1

Enter Tigers runs: 0

Enter Blue Jays runs: 2

Box score after 1 inning

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Team 1

Tigers 0 0

Blue Jays 2 2

Inning 2

Enter Tigers runs: 1

Enter Blue Jays runs: 3

Box score after 2 innings

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Team 1 2

Tigers 0 1 1

Blue Jays 2 3 5

Inning 3

Enter Tigers runs: 0

Enter Blue Jays runs: 0

Box score after 3 innings

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Team 1 2 3

Tigers 0 1 0 1

Blue Jays 2 3 0 5

Inning 4

Enter Tigers runs: 4

Enter Blue Jays runs: 2

Box score after 4 innings

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Team 1 2 3 4

Tigers 0 1 0 4 5

Blue Jays 2 3 0 2 7

Inning 5

Enter Tigers runs: 3

Enter Blue Jays runs: 0

Box score after 5 innings

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Team 1 2 3 4 5

Tigers 0 1 0 4 3 8

Blue Jays 2 3 0 2 0 7

Most-runs innings

Tigers: 4

Blue Jays: 2

Brownie Points: 1

End of Tumbling Tigers

*[your program code here]\**

**If possible, format your code like this:**

**Font “Courier New”**

**Font size “9”s**

**Bold**

*[your program output here]\*\**

\* **Copying-and-pasting Visual C++ code to a Word document**

1) From within the Visual C++ program, press **CTRL-A** and press **CTRL-C**.

2) From within the Word document, press **CTRL-V**.

\*\* **Copying-and-pasting Visual C++ console application output to a Word document**

1) From the Visual C++ console, press **ALT-PrintScreen**.

2) From within the Word document, press **CTRL-V**.