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// Corey Shrader
// main.c
// Program2
//
// Created by Corey Shrader on 9/27/15.
//
// This program, given several pairs of football teams and their stats, will
// compute predictions about which team will win.

#include "football.h" // header file containing library files, constants, and
// function prototypes

void main() {
    char HT[30], VT[30]; // home team and visiting team names
    int HT0, HTD, HTS, HTH, HTC, VT0, VTD, VTS, VTR, predictions=0, homeWins=0,
        visitWins=0, amount; // team stats and prediction counters
    double preference1, preference2, preference3, preference4, preference5,
        sum; // preferences and their sum computed using team stats
    FILE *fp; // file used for input

    fp = fopen("/Users/EntheoMac/Documents/School:NKU/Fall 2015/CSC 362-001
        Computer Systems/Program2/Program2/football2.txt", "r");

    while (!feof(fp)) { // run computations on each line of stats until end of
        file

        input(fp, HT, &HT0, &HTD, &HTS, &HTH, &HTC, VT, &VT0, &VTD, &VTS,
            &VTR); // store stats from current line of file

        compute(HT0, HTD, HTS, HTH, HTC, VT0, VTD, VTS, VTR, &preference1, &
            preference2, &preference3, &preference4, &preference5); // use stats
            to calculate preferences

        sum = prediction(preference1, preference2, preference3, preference4,
            preference5); // use preferences to calculate the "sum"

        amount = (abs((int)sum)==0) ? 1 : abs((int)sum); // determine winning
            team and score difference by taking absolute value of sum as an int.
            if the truncated sum is 0, the team wins by 1

        if (sum < 0) { // visiting team wins
            update(1, 0, 1, &predictions, &homeWins, &visitWins); // update
                running totals
            output(VT, HT, amount); // print game summary
        }
        else { // home team wins
            update(1, 1, 0, &predictions, &homeWins, &visitWins); // update
                running totals
            output(HT, VT, amount); // print game summary
        }
    }
    summary(predictions, homeWins); // print summary of all games, including
        percentage favoring home team

    fclose(fp); // close file
}
```