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#include <stdio.h>
#include <stdlib.h>

#define SIZE 10

/* declare all of the functions before using them */
void readInput (float *floatArray, int arraySize);
void option (int userIn, float *floatArray, int arraySize);
float minArray (float *floatArray, int arraySize);
float maxArray (float *floatArray, int arraySize);
float sumArray (float *floatArray, int arraySize);
float avgArray (float *floatArray, int arraySize);
float dataSet (float *floatArray, int arraySize);

/* Set array size as 10 and call readInput function */
int main () {
    float dataSet[SIZE];
    int dataSetSize = SIZE;

    readInput (dataSet, dataSetSize);
}

/* Finds a minimum value from the array */
float minArray (float *floatArray, int arraySize) {
    int i;
    float min = 0;
    min = floatArray[0];
    for (i = 1; i < arraySize; i++) {
        if (floatArray[i] < min) {
            min = floatArray[i];
        }
    }
    printf("Min: %.2f\n\n", min);
}

/* Finds a maximum value from the array */
float maxArray (float *floatArray, int arraySize) {
    int i;
    float max = 0;
    max = floatArray[0];
    for (i = 1; i < arraySize; i++) {
        if (floatArray[i] > max) {
            max = floatArray[i];
        }
    }
    printf("Max: %.2f\n\n", max);
}

/* Finds a sum of all values from the array */
float sumArray (float *floatArray, int arraySize) {
    int i;
    float sum = 0;
    for (i = 0; i < arraySize; i++) {
        sum = sum + floatArray[i];
    }
    printf("Sum: %.2f\n\n", sum);
}

/* Finds a average of values in the array */

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float avgArray (float *floatArray, int arraySize) {
    int i;
    float avg, total = 0;
    for (i = 0; i < arraySize; i++) {
        total = total +floatArray[i];
    }
    avg = total/arraySize;
    printf("Average:%.2f\n\n", avg);
}

/* Lists data of the array */
float dataSet (float *floatArray, int arraySize) {
    int i;
    printf("Data set:\n");
    for (i = 0; i < arraySize; i++) {
        printf("%.2f\n", floatArray[i]);
    }
    printf("\n");
}

void readInput (float *floatArray, int arraySize) {
    /* initialize integers first */
    int i;
    int userInput;

    /* ask user to enter values for the array */
    printf("Enter values in the data set, each on separate line\n");
    for (i = 0; i < arraySize; i++) {
        scanf("%f", &floatArray[i]);
    }

    /* print out the options and ask user to enter the option */
    printf("choose one of the options:\n");
    printf("(1) Find the minimum value.\n");
    printf("(2) Find the maximum value.\n");
    printf("(3) Calculate the sum of all the values.\n");
    printf("(4) Calculate the average of all the values.\n");
    printf("(5) Print the valus in the data set.\n");
    printf("(6) Exit the program.\n\n");

    /* keep asking user to choose the option */
    /* call switch function and print output for chosen option */
    while (1) {
        scanf("%d", &userInput);
        option(userInput, floatArray, arraySize);
    }
}

/* function containing switch case for each option */
void option (int userIn, float *floatArray, int arraySize) {
    switch (userIn) {
        case 1:
            minArray(floatArray, arraySize);
            break;
        case 2:
            maxArray(floatArray, arraySize);
            break;
        case 3:
            sumArray(floatArray, arraySize);

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        break;
case 4:
    avgArray(floatArray, arraySize);
    break;
case 5:
    dataSet(floatArray, arraySize);
    break;
case 6:
    exit(0);
    break;
default:
    printf("Invalid input. Enter a number between 1 and 6.\n\n");
    break;
    }
}
```