College of Computer Studies
Laboratory Activity Form

Course Number	CSIT221
Course Title	Data Structures and Algorithms 1
Topics Covered:	Array
Objectives:	Implement a program using a dynamic array.

Description

Survey Data Analysis

Computers are commonly used to compile and analyze the results of surveys and opinion polls. Each response is a number from 1 to 9. The program computes for the mean, median and mode of the values. Start with a minimum of 10 responses. If there would be more responses, increase the size.

Mean – arithmetic average
Median – middle value
Mode – value that occurs most frequently
The following are the declarations that will be used by the program:

```
int SIZE 10
typedef int* Statistician;

void add(Statistician answer, int *count, int *SIZE, int item);
```

- Doubles the size of answer when it is full
- Data should be sorted after every insertion.

```
float mean(Statistician answer, int count);
float median(Statistician answer, int count);
int max(Statistician answer, int count);
int min(Statistician answer, int count);
int range(Statistician answer, int count);
void mode(int freq[], int *freqsize, Statistician answer, int count);
```

- Determines the mode by counting the number of responses of each type, then selecting the value with the greatest count.

```
void histogram(Statistician answer, int count);
```

- Produces a histogram to aid in determining the mode graphically. Use asterisks to represents number of occurrences.

Sample Output if Applicable

Remarks

Project name : Survey
Filenames: survey.h, survey.c, main.c