```c
#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>
#define SENTINEL -9999
#define SIZE 100

int printIndexValues(int x[],int cnt);
int get_array_input(int x[],int *cnt);
int displayIndex(int x[]);
int aryXindex(int aryTimesindex[], int x[],int cnt);

int main(void)
{

	int cnt = 0;
	int x[SIZE] = { 0 };
	int aryTimesindex[SIZE] = { 0 };

	get_array_input(x,&cnt);
	printIndexValues(x,cnt);
	displayIndex(x);
	aryXindex(aryTimesindex, x, cnt);


	return(0);
}

int get_array_input(int x[],int *cnt)
{
	for (int i = 0; i < SIZE; i++)
	{

			scanf("%d", &x[i]);

			if (x[i] == SENTINEL)
			{
				break;
			}

			*cnt = *cnt + 1;

	}
}

int printIndexValues(int x[], int cnt)

{
	for (int i = 0; i < cnt && x[cnt] != 0; i++)
	{
			printf("|%d", x[i]);
	}
	printf("|");
	printf("\n");
}
```

```
int displayIndex(int x[])
{
	for (int i = 0; i < 5; i++)
	{
			int index_num = 0;

			printf("What index in the array would youy like to
display?\n");
			scanf("%d", &index_num);
			if (index_num > 100)
			{
					printf("Sorry, that's out of the range for
the array. Max index number is 100.\n");
			}
			else
			{
					printf("|%d|\n", x[index_num]);

			}

	}
}

int aryXindex(int aryTimesindex[], int x[],int cnt)
{
	printf("These are the values of the index numbers multiplied by
value of said index.\n");
	printf("|");
	for (int i = 0; i < cnt; i++)
	{
			aryTimesindex[i] = x[i] * i;
			printf("%d|", aryTimesindex[i]);
	}
}
```