**MARKS AWARDED: 95**

/\* CS1010 AY2011/2 Semester 2 Lab5 Ex2

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\* min\_index.c

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\* Find the index of the smallest element

\* in an array of n integers

\* where 0 < n <= 10

\*

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\* B02

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#include <stdio.h>

#define MAX\_SIZE 10

int get\_min\_index(int [], int);

int get\_min\_index\_rec(int, int [], int, int);

int main(void)

{

int arr[MAX\_SIZE];

int i,

n, // actual number of array elements

min\_index; // index of smallest array element

printf("How many elements? ");

scanf("%d", &n);

printf("Enter %d elements:\n", n);

for (i=0; i<n; i++)

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

min\_index = get\_min\_index(arr,n);

printf("Index of min element: %d\n", min\_index);

return 0;

}

// recursive function, return index of

// the smallest array element

int get\_min\_index(int arr[],int size)

{

return get\_min\_index\_rec(0,arr,1,size);

}

// auxiliary function of get\_min\_index

int get\_min\_index\_rec(int min\_index, int arr[], int start, int size)

{

if (start==size)

return min\_index;

else

{

if (arr[min\_index]>arr[start])

min\_index=start;

return get\_min\_index\_rec(min\_index,arr,start+1,size);

}

}