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/\*-----------------DO NOT MODIFY--------\*/

**.global** Welcomeprompt

**.global** printf

**.global** cr

**.extern** value

**.extern** getstring

.syntax unified

**.text**

**Welcomeprompt:**

/\*-----------------Students write their subroutine here--------------------\*/

PUSH {lr}

PUSH {r0}

PUSH {r1}

PUSH {r2}

PUSH {r3}

PUSH {r4}

PUSH {r5}

PUSH {r6}

PUSH {r7}

.equ memstart, 0x20001000

ldr r5,=memstart

bl cr

ldr r0,=WelcomeString

bl printf

bl cr

**getnumEntries:**

ldr r1,=Prompt

bl printf

bl cr

bl getstring

mov r4, r0 //save the number of entires counters

bl value

bl cr

cmp r4, #3

blt low

cmp r4, #10

bgt high

B getarr

**low:**

ldr r3,=Prompt3

bl printf

bl cr

B getnumEntries

**high:**

ldr r6,=Prompt4

bl printf

bl cr

B getnumEntries

**getarr:**

ldr r6,=Prompt1

bl printf

bl cr

bl getstring

mov r5, r0

cmp r5, #0

ble lowar

sub r4, #1

cmp r4 #1

beq lstdig

blt exit

**lowar:**

ldr r7,=Prompt1

bl printf

bl cr

b getarr

**lstdig:**

ldr r8,=Prompt2

bl printf

bl cr

B getarr

**exit:**

str r4,[sp,#36] /\*It stores

the value of # of entries on

the top of the stack\*/

POP {r7}

POP {r6}

POP {r5}

POP {r4}

POP {r3}

POP {r2}

POP {r1}

POP {r0}

POP {PC}

/\*-------Code ends here ---------------------\*/

/\*-----------------DO NOT MODIFY--------\*/

**.data**

/\*--------------------------------------\*/

**WelcomeString:**

.string "Welcome to Wing's Bubble Sort Program"

**Prompt:**

.string "Please enter the number(3min-10max) of enteries followed by `enter'"

**Prompt1:**

.string "Please enter a number(positive only) followed by `enter'"

**Prompt2:**

.string "Please enter the last number(positive only) followed by `enter'"

**Prompt3:**

.string "Invalid entry, Please enter more than 2 entry"

**Prompt4:**

.string "Too many entries"

**Prompt5:**

.string "Negative value entered, only postive ones accepted"