LAB REPORT

COMPUTER ARCHITECTURE

Lab 2

Branches and procedures

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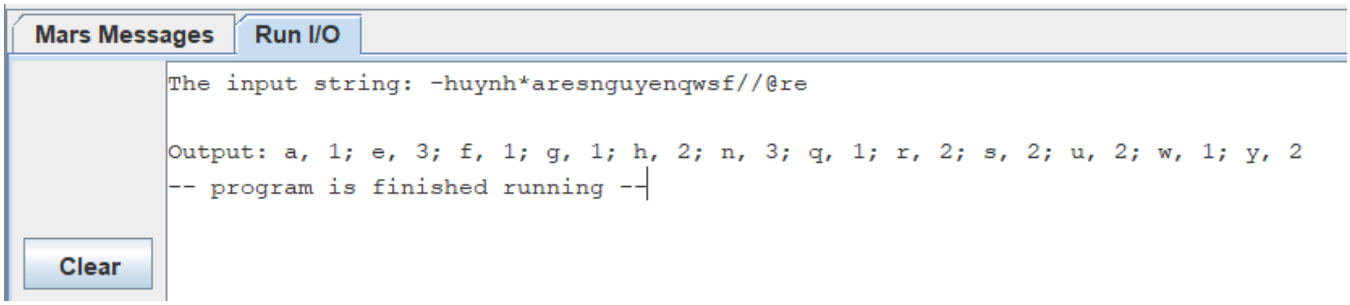
Group: CC11

Exercise 1:

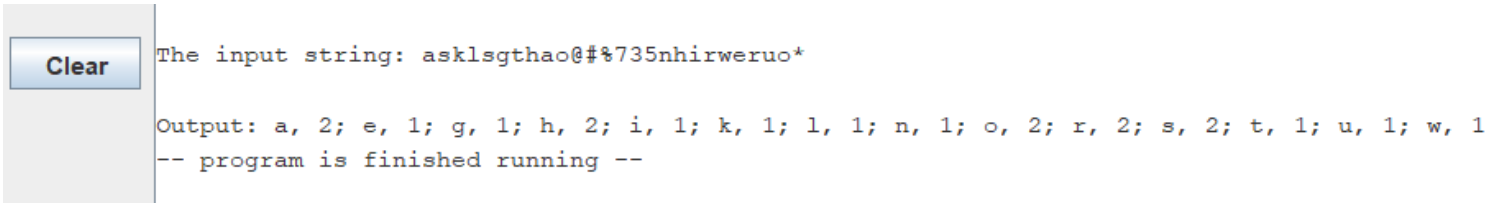
+ Test 1: -huynh*aresnguyenqwsf//@re

-> Output: a, 1; e, 3; f, 1; g, 1; h, 2; n, 3; q, 1; r, 2; s, 2; u, 2; w, 1; y, 2



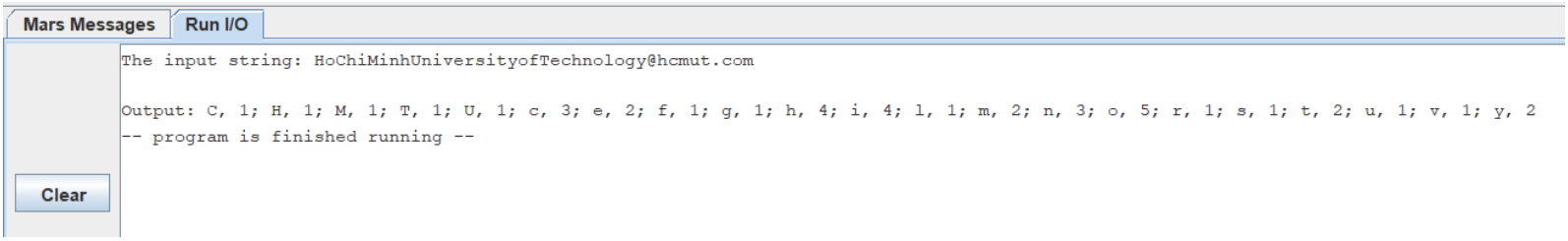
+ Test 2: asklsgthao@#%735nhirweruo*

-> Output: a, 2; e, 1; g, 1; h, 2; i, 1; k, 1; l, 1; n, 1; o, 2; r, 2; s, 2; t, 1; u, 1; w, 1



+ Test 3: HoChiMinhUniversityofTechnology@hcmut.com

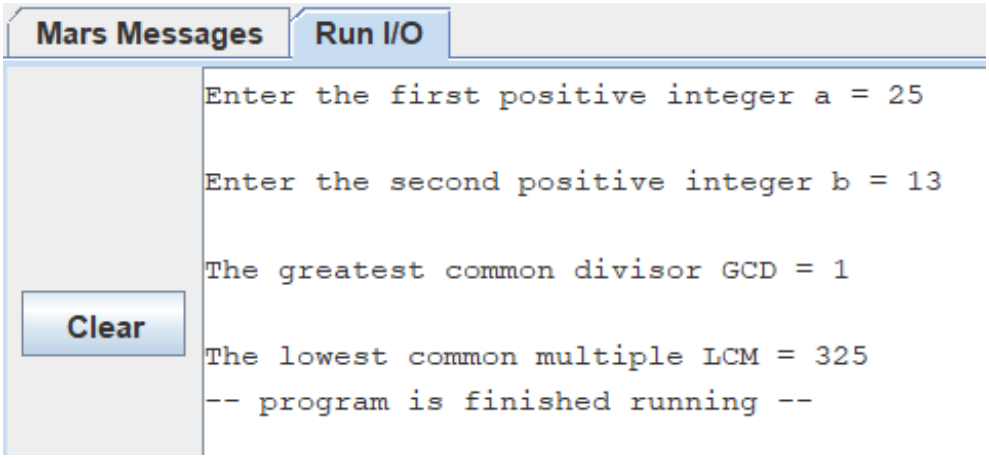
-> Output: C, 1; H, 1; M, 1; T, 1; U, 1; c, 3; e, 2; f, 1; g, 1; h, 4; i, 4; l, 1; m, 2; n, 3; o, 5; r, 1; s, 1; t, 2; u, 1; v, 1; y, 2



Exercise 2:

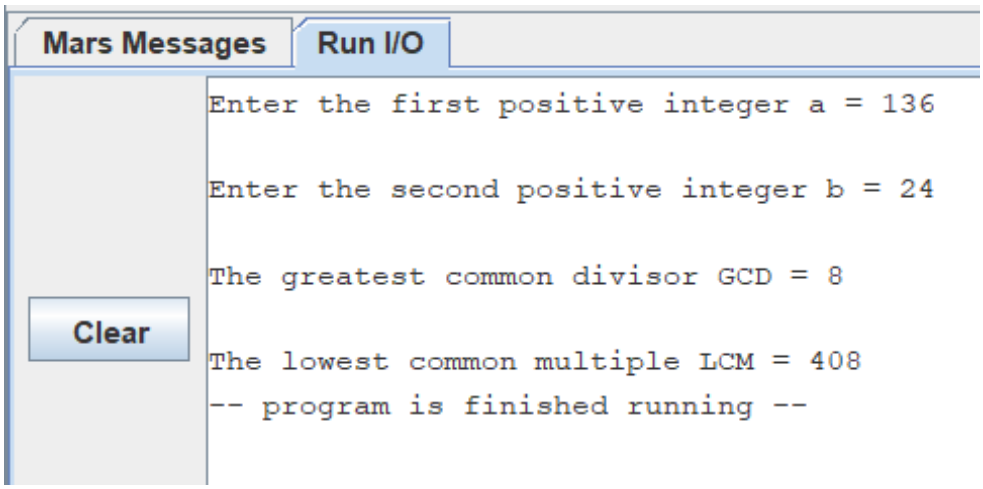
+ **Test 1:** a = 25, b = 13

-> **Output:** GCD = 1, LCM = 325



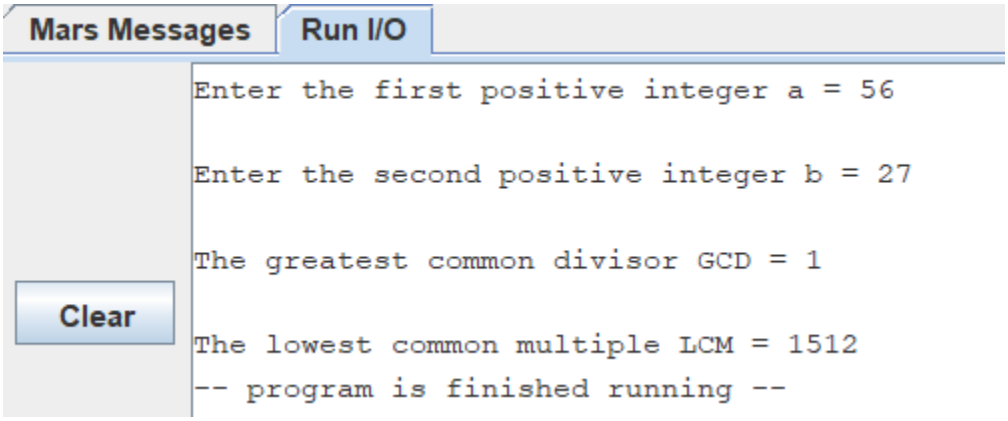
+ Test 2: a = 136, b = 24

-> Output: GCD = 8, LCM = 408



+ Test 3: a = 56, b = 27

-> Output: GCD = 1, LCM = 1512



Exercise 3:

+ Test 1: 1, 2, 3, 4, 5, 6, 7

-> Output:

Please insert a element: 1

Please insert a element: 2

Please insert a element: 3

Please insert a element: 4

Please insert a element: 5

Please insert a element: 6

Please insert a element: 7

The original array is: 1, 2, 3, 4, 5, 6, 7

Building max heap: 7, 5, 6, 4, 2, 1, 3

Building max heap: 6, 5, 3, 4, 2, 1, 7

Building max heap: 5, 4, 3, 1, 2, 6, 7

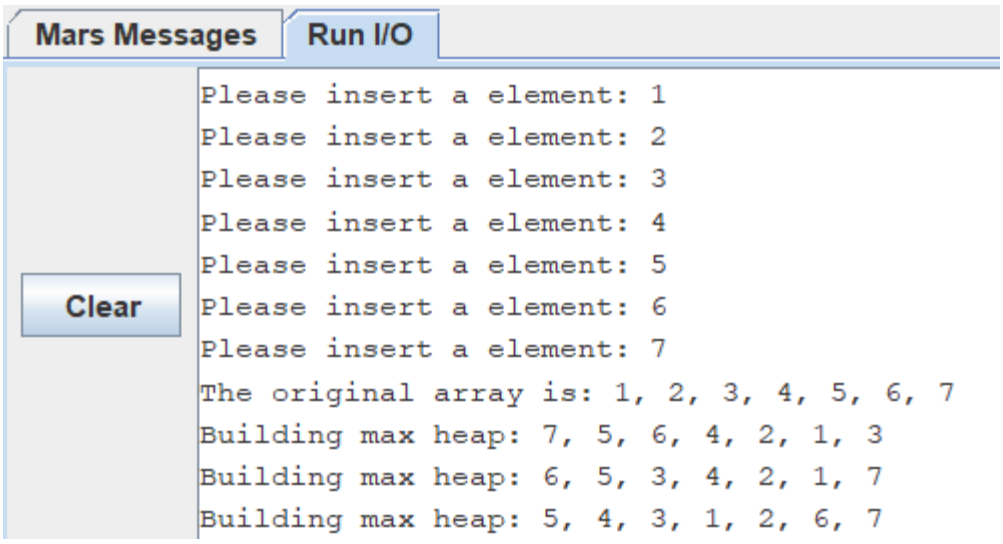
Building max heap: 4, 2, 3, 1, 5, 6, 7

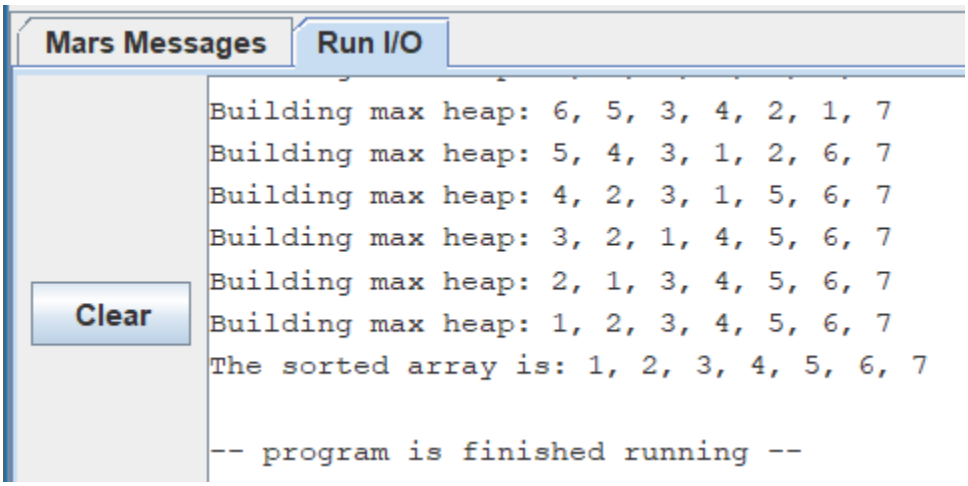
Building max heap: 3, 2, 1, 4, 5, 6, 7

Building max heap: 2, 1, 3, 4, 5, 6, 7

Building max heap: 1, 2, 3, 4, 5, 6, 7

The sorted array is: 1, 2, 3, 4, 5, 6, 7





+ **Test 2:** 7, 6, 5, 4, 3, 2, 1

-> **Output:**

Please insert a element: 7

Please insert a element: 6

Please insert a element: 5

Please insert a element: 4

Please insert a element: 3

Please insert a element: 2

Please insert a element: 1

The original array is: 7, 6, 5, 4, 3, 2, 1

Building max heap: 7, 6, 5, 4, 3, 2, 1

Building max heap: 6, 4, 5, 1, 3, 2, 7

Building max heap: 5, 4, 2, 1, 3, 6, 7

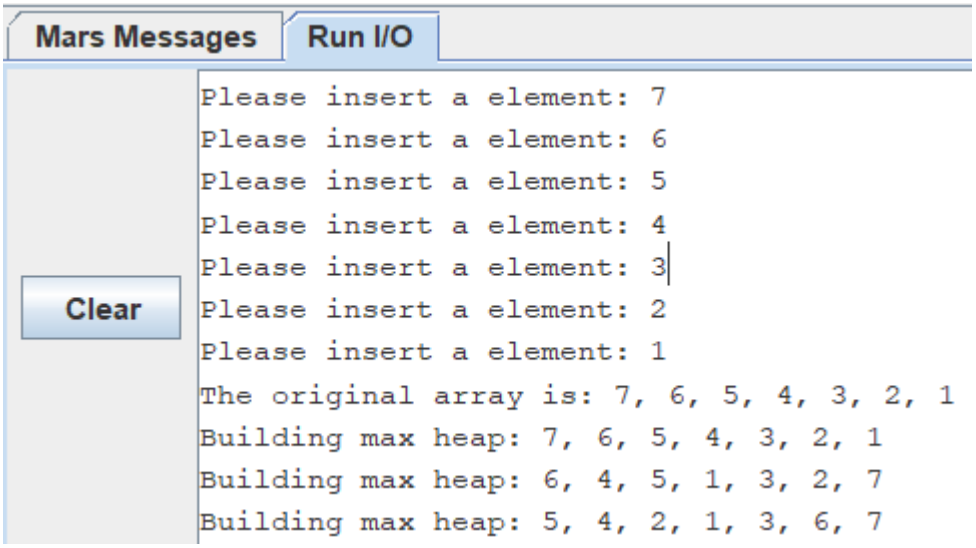
Building max heap: 4, 3, 2, 1, 5, 6, 7

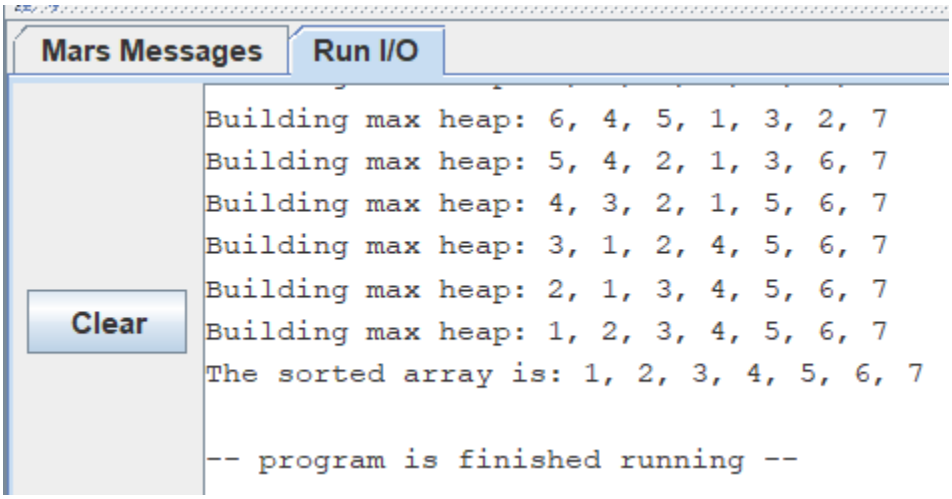
Building max heap: 3, 1, 2, 4, 5, 6, 7

Building max heap: 2, 1, 3, 4, 5, 6, 7

Building max heap: 1, 2, 3, 4, 5, 6, 7

The sorted array is: 1, 2, 3, 4, 5, 6, 7





+**Test 3:** 0, 24, 13, 6, 8, 10, 9

-> **Output:**

Please insert a element: 0

Please insert a element: 24

Please insert a element: 13

Please insert a element: 6

Please insert a element: 8

Please insert a element: 10

Please insert a element: 9

The original array is: 0, 24, 13, 6, 8, 10, 9

Building max heap: 24, 8, 13, 6, 0, 10, 9

Building max heap: 13, 8, 10, 6, 0, 9, 24

Building max heap: 10, 8, 9, 6, 0, 13, 24

Building max heap: 9, 8, 0, 6, 10, 13, 24

Building max heap: 8, 6, 0, 9, 10, 13, 24

Building max heap: 6, 0, 8, 9, 10, 13, 24

Building max heap: 0, 6, 8, 9, 10, 13, 24

The sorted array is: 0, 6, 8, 9, 10, 13, 24