Sample Run of Priority Test

priority\_test()

**‘Queue Contents:’**

pQueue = 0×1 empty struct array with fields:

key

cost

**‘Insert Oranges, 4.5'**

**‘Queue Contents:’**

struct with fields:

key: 'Oranges'

cost: 4.5000

**‘Insert Apples, 1'**

**‘Queue Contents:’**

struct with fields:

key: 'Oranges'

cost: 4.5000

struct with fields:

key: 'Apples'

cost: 1

**‘Insert Bananas, 2.7'**

‘Queue Contents:’

struct with fields:

key: 'Oranges'

cost: 4.5000

struct with fields:

key: 'Apples'

cost: 1

struct with fields:

key: 'Bananas'

cost: 2.7000

**'Extract Min'**

priorityQ = 2×1 struct array with fields:

key

cost

extractKey = 'Apples'

extractCost = 1

**‘Queue Contents:’**

struct with fields:

key: 'Oranges'

cost: 4.5000

struct with fields:

key: 'Bananas'

cost: 2.7000

**‘Insert Canaloupe, 3'**

**‘Queue Contents:’**

struct with fields:

key: 'Oranges'

cost: 4.5000

struct with fields:

key: 'Bananas'

cost: 2.7000

struct with fields:

key: 'Cantaloupe'

cost: 3

**'Is Oranges a member?'**

member = logical 1

**'Extracting remaining contents'**

priorityQ = 2×1 struct array with fields:

key

cost

extractKey = 'Bananas'

extractCost = 2.7000

**‘Queue Contents:’**

struct with fields:

key: 'Oranges'

cost: 4.5000

struct with fields:

key: 'Cantaloupe'

cost: 3

priorityQ = struct with fields:

key: 'Oranges'

cost: 4.5000

extractKey = 'Cantaloupe'

extractCost = 3

**‘Queue Contents:’**

struct with fields:

key: 'Oranges'

cost: 4.5000

priorityQ = 1×0 empty struct array with fields:

key

cost

extractKey = 'Oranges'

extractCost = 4.5000

**‘Queue Contents:’**

pQueue = 1×0 empty struct array with fields:

key

cost

**diary off**

**Sample Run with non-string Keys:**

Q = priority\_prepare()

Q = 0×1 empty struct array with fields:

key

cost

Q = priority\_insert(Q, 12312, 34234)

Q = struct with fields:

key: 12312

cost: 34234

Q = priority\_insert(Q, [1 2], 34234)

Q = array with fields:

key

cost

priority\_isMember(Q, [1 2])

ans = logical 1

diary off