#### **Data Structure HW7**

# **41147009S** 陳炫佑

Q1

#### **INSERTION SORT**

i round	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
_	60	50	20	35	40	91	65	110	70	10
1	50	60	20	35	40	91	65	110	70	10
2	20	50	60	35	40	91	65	110	70	10
3	20	35	50	60	40	91	65	110	70	10
4	20	35	40	50	60	91	65	110	70	10
5	20	35	40	50	60	91	65	110	70	10

#### **Q**UICK **S**ORT

i round	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
_	60	50	20	35	40	91	65	110
1	10	50	20	35	40	(60)	65	110
2	(10)	50	20	35	40	60	(65)	110
3	10	40	20	35	(50)	60	65	91
4	10	35	20	(40)	50	60	65	70
5	10	20	(35)	40	50	60	65	(70)

## Merge Sort

i round	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
_	60	50	20	35	40	91	65	110	70	10
1	50	60	20	35	40	65	91	110	10	70
2	50	60	20	35	40	65	91	10	70	110
3	20	35	40	50	60	10	65	70	91	110
4	10	20	35	40	50	60	65	70	91	110
5	10	20	35	40	50	60	65	70	91	110

# Q2

i round	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
-	60	50	20	35	40	91	65	110	70	10
step 1	10	35	20	60	40	91	65	110	70	50
step 2.1	20	35	50	60	40	91	65	110	70	10
step 2.2	35	40	50	60	70	91	65	110	20	10
step 2.3	40	60	50	110	70	91	65	35	20	10
step 2.4	50	60	65	110	70	91	40	35	20	10
step 2.5	60	70	65	110	91	50	40	35	20	10

# Q3

## LSD

i	[0]	[1]	[2]	[3]	[4]
goods[i].k	ACD6D	5DD6C	CAB8D	KBI8A	XVJ7D
round					
1	KBI8A	5AJ8A	KVI8A	5DD6C	5CI8C
2	5DD6C	ACD6D	XVJ7D	KBI8A	5AJ8A
3	CAB8D	5DD6C	ACD6D	KBI8A	KVI8A
4	CAB8D	AAI9D	5AJ8A	KBI8A	ACD6D
5	5AJ8A	5CI8C	5DD6C	AAI9D	ACD6D

#### MSD

i	[0]	[1]	[2]	[3]	[4]
goods[i].k	ACD6D	5DD6C	CAB8D	KBI8A	XVJ7D
round					
1	5DD6C	5CI8C	5AJ8A	ACD6D	AAI9D
2	5AJ8A	5CI8C	5DD6C	AAI9D	ACD6D
3	5AJ8A	5DD6C	5DD6C	AAI9D	ACD6D
4	5AJ8A	5DD6C	5DD6C	AAI9D	ACD6D
5	5AJ8A	5CI8C	5DD6C	AAI9D	ACD6D