A5-1

1. /user/rt/courses/
2. /user/rt/courses/, cs016/, homeworks/, programs/, cs252/, projects/, papers/, demos/
3. Cs016/ has 9 descendants
4. It has only 1 ancestor(/user/rt/course/)
5. Its siblings are grades/ and programs/.
6. Papers/ and demos/
7. 4
8. 5

A6-1

A6-2

1. (1, D), (3, J), (4, B), (5, A), (2, H), (6, L)

A6-3

A6-4 <Selection sort>

(22, 15, 36, 44, 10, 3, 9, 13, 29, 25)

Input: Sequence: (22, 15, 36, 44, 10, 3, 9, 13, 29, 25) Priority Queue: ()

Phase1

1. (15, 36, 44, 10, 3, 9, 13, 29, 25) (22)
2. (36, 44, 10, 3, 9, 13, 29, 25) (22, 15)

…

1. () (22, 15, 36, 44, 10, 3, 9, 13, 29, 25)

Phase2

1. (3) (22, 15, 36, 44, 10, 9, 13, 29, 25)
2. (3, 9) (22, 15, 36, 44, 10, 13, 29, 25)
3. (3, 9, 10) (22, 15, 36, 44, 13, 29, 25)
4. (3, 9, 10, 13) (22, 15, 36, 44, 29, 25)
5. (3, 9, 10, 13, 15) (22, 36, 44, 29, 25)
6. (3, 9, 10, 13, 15, 22) (36, 44, 29, 25)
7. (3, 9, 10, 13, 15, 22, 25) (36, 44, 29)
8. (3, 9, 10, 13, 15, 22, 25, 29) (36, 44)
9. (3, 9, 10, 13, 15, 22, 25, 29, 36) (44,)
10. (3, 9, 10, 13, 15, 22, 25, 29, 36, 44) ()

A6-5 <Insertion sort>

Input: Sequence: (22, 15, 36, 44, 10, 3, 9, 13, 29, 25) Priority Queue: ()

Phase1

1. (15, 36, 44, 10, 3, 9, 13, 29, 25) (22)
2. (36, 44, 10, 3, 9, 13, 29, 25) (15, 22)
3. (44, 10, 3, 9, 13, 29, 25) (15, 22, 36)
4. (10, 3, 9, 13, 29, 25) (15, 22, 36, 44)
5. (3, 9, 13, 29, 25) (10, 15, 22, 36, 44)
6. (9, 13, 29, 25) (3, 10, 15, 22, 36, 44)
7. (13, 29, 25) (3, 9, 10, 15, 22, 36, 44)
8. (29, 25) (3, 9, 10, 13, 15, 22, 36, 44)
9. (25) (3, 9, 10, 13, 15, 22, 29, 36, 44)
10. () (3, 9, 10, 13, 15, 22, 25, 29, 35, 44)

Phase2

1. (3) (9, 10, 13, 15, 22, 25, 29, 35, 44)
2. (3, 9) (10, 13, 15, 22, 25, 29, 35, 44)

…

g. (3, 9, 10, 13, 15, 22, 25, 29, 35, 44) ()