## VE281 Writing Assignment One

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Ex. 1

| step | pivot | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9  | comment                       |  |  |
|------|-------|---|---|---|---|---|---|---|---|---|----|-------------------------------|--|--|
| 1    | 5     | 5 | 7 | 4 | 1 | 8 | 9 | 2 | 6 | 3 | 10 | swap $arr[0]$ and pivot       |  |  |
| 1    | 5     | 5 | 3 | 4 | 1 | 2 | 9 | 8 | 6 | 7 | 10 | partition                     |  |  |
| 1    | 5     | 2 | 3 | 4 | 1 | 5 | 9 | 8 | 6 | 7 | 10 | swap arr[0] and partition pos |  |  |
| 2    | 2     | 2 | 3 | 4 | 1 |   |   |   |   |   |    | swap $arr[0]$ and pivot       |  |  |
| 2    | 2     | 2 | 1 | 4 | 3 |   |   |   |   |   |    | partition                     |  |  |
| 2    | 2     | 1 | 2 | 4 | 3 |   |   |   |   |   |    | swap arr[0] and partition pos |  |  |
| 3    |       |   |   | 3 | 4 |   |   |   |   |   |    | insertion sort arr[2],arr[3]  |  |  |
| 4    | 8     |   |   |   |   |   | 8 | 9 | 6 | 7 | 10 | swap arr[5] and pivot         |  |  |
| 4    | 8     |   |   |   |   |   | 8 | 7 | 6 | 9 | 10 | partition                     |  |  |
| 4    | 8     |   |   |   |   |   | 6 | 7 | 8 | 9 | 10 | swap arr[5] and partition pos |  |  |
| 5    |       |   |   |   |   |   | 6 | 7 |   |   |    | insertion sort arr[5],arr[6]  |  |  |
| 6    |       |   |   |   |   |   |   |   |   | 9 | 10 | insertion sort arr[8],arr[9]  |  |  |

Ex. 2

| step | 0   | 1   | 2          | 3                        | 4          | 5          | 6          | 7          | 8          | 9                 |
|------|-----|-----|------------|--------------------------|------------|------------|------------|------------|------------|-------------------|
| 1    |     |     | 032<br>632 | 943                      |            |            | 446<br>526 |            | 538<br>738 | 189<br>479<br>379 |
| 2    |     |     | 526        | 032<br>632<br>538<br>738 | 943<br>446 |            |            | 479<br>379 | 189        |                   |
| 3    | 032 | 189 |            | 379                      | 446<br>479 | 526<br>538 | 632        | 738        |            | 943               |

Ex. 3