

# 1 Exercise 4

## 1.1 Part A

- What do the loops in the program fragments do?

**1st loop:** This loop should print out the numbers 1 to 3 in ascending order

**2nd loop:** This loop should print out the numbers 1 to 3 in reverse order, i.e. beginning from 3 to 1

**3rd loop:** This loop utilizes the keyword 'reverse' to specify the same action as in the 2nd loop.

**4th loop:** This loop attempts to print the same output as in the 1st loop by utilizing the keyword 'reverse' to change the specified descending order to ascending.

## 1.2 Part B

- Does the compiler generate any errors?

Yes. For loops 2 and 4, the warning message "loop range is null. Loop will not execute" is generated

**Why?** This is because the Ada compiler considers a range from upper to lower bound as an empty list[1].[?]

## References

1. Wheeler, D.A. Loop Iteration Schemes. Retrieved from: <https://dwheeler.com/lovelace/s5sf.htm>  
Date Accessed: 25. October, 2018.