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**Exercise 4.1**

(1) 1 statement

2 while booleanexpr do

3 statement

4 endwhile

(2) 1 repeat

2 if booleanexpr then

3 statement

4 endif

5 until booleanexpr do

6 endrepeat

**Exercise 4.2 (I'm no even sure what to write in this exercise 😐)**

Specification changeorientation

Var degree, orientation : Real

Pre 360 >= degree >= 0

Post change orientation by degree

Reads -

Changes orientation

Mem -

Specification movetopoint

Var x, y, orientation : Real

Pre -

Post change X by x, and Y by y.

Reads -

Changes fibn

Mem -

**Exercise 4.3**

Specification

Var n, fibn : Integer

Pre n >= 0

Post fibn = Fib(n)

Reads -

Changes fibn

Mem -

1 module fib(n : Integer) : Integer

2 if n = 0 then

3 return 0

4 else if n = 1 then

5 return 1

6 else

7 return fib(n – 1) + fib(n – 2)

8 endif

9 endif

10 endmodule