**Software Development 1**

**Lab 1**

**Liam Meade X00229895**

*Write the pseudo-code solutions for the following problems:  
1. Input three whole numbers and output the average of the three numbers.*

**inputs**

variable num1

variable num2

variable num3

**outputs**

const average = num1 + num2 + num3 / 3

**algorithm**

1. Input first whole number and store in variable called num1.
2. Input second whole number and store in variable called num2.
3. Input third whole number and store in variable called num3.
4. Calculate average by adding the three whole numbers together and then dividing by the amount of numbers (3).

*2. Write the pseudo-code that inputs a person’s weight (in kilos) and displays(outputs) the number of calories that person needs in one day. A person needs 42 calories per kilo of body weight.*

**inputs**

variable weight

**outputs**

const caloriesPerDay = weight \* 42

**algorithm**

1. Input weight and store in variable called weight.
2. Calculate calories needed per day by multiplying weight by 42 (calories needed per kg).

*3. When you say that you are 18 years old, you are really saying that the Earth has circled the Sun 18 times. Since other planets take fewer or more days than Earth to travel around the Sun, your age would be different on other planets. You can compute how old you are on other planets by the formula  
y = (x \* 365) / d  
“ \* ” means multiplication  
“/ ” means division  
where x is the age on Earth  
y is the age on planet Y  
d is the number of Earth days the planet Y takes to travel around the Sun.  
Write the pseudo-code that inputs the user’s Earth age and displays(outputs) his or her age on Mercury, Venus, Jupiter and Saturn. The values for d are listed in the table below:  
d = Approximate Number of Earth days for the given Planet to travel around the Sun  
Mercury 88  
Venus 225  
Jupiter 4,380  
Saturn 10,767*

**inputs**

variable age

**outputs**

ageOnMercury = (age \* 365) / 88

ageOnVenus = (age \* 365) / 225

ageOnJupiter= (age \* 365) / 4,380

ageOnSaturn = (age \* 365) / 10,767

**algorithm**

1. Input your current age and store in a variable called age.
2. Using the formula to calculate your age on other planets, output age on Mercury, Venus, Jupiter and Saturn by multiplying age by 365 and dividing by each planet’s approximate number of Earth days to travel around the Sun.