

## Cosc 2P12

### Assignment 5

(Due date for assignment is Friday December 10<sup>th</sup>, 4:00 p.m. est., Late date Monday December. 13<sup>th</sup>, 4:00 p.m. est)

#### Goal

The goal of this assignment is to introduce Floating Point operations in MIPS.

#### Background

Let us assume you are a farmer and must administer some drug to your ailing animals. The instructions on the medication read “administer 1ml (1cc) per X Kilos of body weight”, this being a standard way of describing dosages. Since several animals are to be treated, and the farmer is old school, he weighs the animals in pounds. A conversion table is required.

#### The Assignment

You are dealing with a cattle farmer, where an animal can range from 500 lbs, to 1300 lbs. Your program is to prompt for X, see above. Then produce a dosage table based on the animal’s body weight in pounds. This should be in the form of a table which ranges from 500 to 1300 lbs. in 50 lbs increments. There are 453.592 grams / pound.

Example calculation:

$X = 25 \text{ kilos, thus } 25 \times 1000 / 453.592 = 55.12 \text{ lbs} = Y.$

So, 500 lb animal requires  $500 / 55.12 = 9.07 \text{ cc}$  of medication.

Table should look similar to below

```
=====
1 cc per Y pounds of body weight
Weight          Dosage
=====
500              xxx
550              xxx
...
1300             xxx
```

Note, your table will not be so clean since the default print of a double includes many decimal places and could be in scientific notation.

#### Submission

This submission will be submitted electronically as a MIPS assembly file.

The TA will be running your program to ensure it is fully functional. Make the marker happy!!!

For the electronic submission, use Sakai, an assignment 5 submission will be available.

The End