# Spring 2015 CDA3101

## Programming Assignment I

**Date assigned: Jan 21th, 2015**

**Due date: Jan 30th, 2015, 11:55 pm**

**Problem Statement:**

Transform the following code into MIPS instructions. Your programs should run correctly on the QtSPIM simulator. Your submission should include a single \*.s file containing the neatly written/organized MIPS code. Important: you should use comments (‘#’ followed by text) in order to make your programs more readable.

A typical palindrome is a word, phrase, number, or other sequence of characters which reads the same backward or forward. Famous examples include "A man, a plan, a canal, Panama!", "Amor, Roma", "race car", "taco cat”. Following code snippet is a palindrome checker for only positive integer numbers. Examples of palindrome numbers are “123454321”, “464”, “66”.

**Code Snippet:**

int num, reverse = 0, temp;

printf("Programming assignment 1 for CDA3101**\n**");

printf("This palindrome checker only deals with positive integer number.**\n**");

printf("Enter a number to check if it is a palindrome or not.**\n**");

scanf("%d",&num);

temp = num;

while( temp != 0 )

{

reverse = reverse \* 10;

reverse = reverse + temp%10;

temp = temp/10;

}

if ( num == reverse )

printf("%d is a palindrome number.**\n**", num);

else

printf("%d is not a palindrome number.**\n**", num);