**COMP3315 Lab3: MIPS Branches and Loops**

24/10/2023

**Number and Name:**

1. **Object**: MIPS Branch and Loop examples using arrays
2. **Procedure**:

Write and run a MIPS algorithm that has an 9 positive integer element array at the data segment and the code finds the second largest element of the array using a loop and prints it. Write the C code first,then convert it to MIPS code and output in box below. Upload your “.docx” file with “.asm” file to submission area.

#include <stdio.h>

int main(){

int i;

int arr[9]={1,2,3,4,5,6,7,8,9};

int max1 = arr[0];

int max2 = arr[1];

if(max2>max1){

int temp=max1;

max1=max2;

max2=temp;

}

for(i=2;i<9;i++){

if(arr[i] > max1){

max2=max1;

max1=arr[i];

}

else if(arr[i] > max2){

max2=arr[i];}

}

printf ("%d", max2);

return 0;

}