**COMP 3315 Lab5: Procedure Calls**

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1. **Object**: MIPS Procedure call conventions
2. **Procedure**:

Write and run a MIPS algorithm that inputs an array of integers at data segment arr1 and the code stores only the positive elements of arr1 to arr2. Use test procedure that inputs a single integer and returns 1 if integer is positive and 0 if it is negative by testing the MSB of the integer. Call test for each member of the array.

**Example**: *arr1*: .word 5, -1, 4, -6, 0, 8, -3, 7

arr2 : 5, 4, 0, 8, 7

Write the C code first and then convert it to MIPS code and the output with short comments in the box below.

int test(int arr1[], int length){

int i;

for (i=0; i<length; i++){

if(arr1[i]>0){return 1;}}

return 0;

}

int main(){

int arr1[8] = {5,-1,4,-6,0,8,-3,7}

int arr2[4];

int j=0, i;

for (i = 0; i < 8; i++) {

if(test(&arr1[i], 1)){

arr2[j]=arr1[i];

j++;}}

for(i=0 ; i<j ; i++){

printf(“%d”, arr2[i]);}

return 0;

}