Homework 9

Due: 11 PM Apr 12, 2017

Question 1

Generate the MIPS code for the following function:

```
int doubleSum(int a, int b) {
  b = a + b;
  return b * 2;
}
```

Make sure that your function saves the return address and control link on the stack. You may choose to compute intermediate values on the stack (as discussed in class) or you may choose to use registers. List any conventions that you are assuming in your function (i.e. what is the offset or register where parameters are passed? What register or slot do you place return values?)

Question 2

Consider the following block of MIPS code:

```
.text
main:
  li $t0 2
  li $t1 4
  addu $t0 $t1 $t0
  sw $t0 ($sp)
  sw $t1 4($sp)
  li $t2 8
  subu $sp $sp $t2
  lw $t3 4($sp)
  lw $t0 8($sp)
  li $ra 0x0
  jr $ra
```

List the values in each of the following registers immediately after the `jr` instruction:

- `$t0`
- `$t1`
- `$t2`
- `$t3`
- `$ra`

If any value is undefined by the function put **undefined** as the value.