

Student Name:	Lab 9
---------------	-------

Create a MIPS program to implement the following pseudo code (you may start with a copy of Lab 8):

```
int a = 0;
int b = 10;
int c = 5;
int d = 9;
int e = 7;
int k = input("Please enter a value for k:");
while (k >= 0) {
    if (k == 0) {
        a = b + c;
    }
    elseif (k == 1) {
        a = d + e;
    }
    elseif (k == 2) {
        a = d - e;
    }
    elseif (k == 3) {
        a = b - c;
    }
    else {
        a = 0;
    }
    print("The value for a is:" + a);

    k = input("Please enter a value for k:");
}
print("Goodbye");
```

Example output:

```
Please enter a value for k:0
The value of a is: 15
Please enter a value for k:1
The value of a is: 16
Please enter a value for k:2
The value of a is: 2
Please enter a value for k:3
The value of a is: 5
Please enter a value for k:4
The value of a is: 0
Please enter a value for k:-1
Goodbye
```

- Initialize the symbols in your data section.
- Ask the user to enter a value for k.
- Implement code needed for the if/elseif/else statement.
- After your calculation in registers, store the value of **a** back into the proper memory location.
- Print the value of **a** from the memory location and not the register.
- Print the exit message.

Lab

The following is required for all assignments and is included in the rubric for grading:

- You need to name your file as “LastName-Name-Lab9.asm” (Example: Talley-Michelle-Lab9.asm)
- Your program will need to have the exact output unless otherwise stated.
- Your source needs to have comments that explain your implementation.
- You need to include the following set of comments at the top of your source code for all assignments.
#Your Name
#Assignment # (Example: Lab #9)
- You need to submit your source code on blackboard.
- You may use utils.asm, but you must include it in a zip file when you submit your assignment.