Computer Architecture Lab 4

Topic: Functions

Write a simple calculator which accepts two numbers from the user and either the operation addition (+) multiplication (*) or power (^). Multiplication should handle negative numbers. For the power operation, assume the first number is the base and the second the power. The power operation should handle negative bases but not negative powers.

Limitations on the implementation:

1. Write a function to do add. The function should use the MIPS add command and return the result in $v0 . Be sure to use Jal and jr
2. Write a function to do multiplication which accepts two integer parameters in $ao and $a1 and returns their product in $v0. The catch is that the function should only use the previously defined **add** function and not the mult or mul operation.
3. Write a power function which computes the value of one number raised to any positive whole number. The function should have two integer parameters in $a0 and $a1 (one is the base and the other is the power by which it is raised) and returns the correct result in $v0. Use the **previously defined** multiplication function. Do not use the mult or mul operatations.

As described in the course material, use the **stack** to store any registers that your functions alter.