Protect 1 Report

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1.0: Program Input/Output

Program 1: the first output is asking for user's name. The input will be user's name. the last output will be "welcome, " and user's name.
P**rogram 2**: the outputs will ask for the value of a, b, c, and d. the input will be the values for each of them. The last output twill be what F equals.
P**rogram 3**: no input. Output will be what F equals at every i
Program 4: no input, but the output would be what i is in the array.

2.0: Program Design

Program 1: The code is supposed to print out a greeting to the user and ask them for their name. The code will then take in a name from the user that is at max 20 characters. The code will print a welcome message and the user's name.
Program 2: The code will start by asking the user for the value of A, then store that value in $s0. Then, the code will ask for B and store it in $s1. Next, the code will ask for C and store it in $s2. Lastly, the code will ask for D and store it in $s3. The code will then plug the numbers into equation F and print it out to the user.
Program 3: The is assigning the numbers of i, j, and k to $s0, $s1, and $s2 (i=0, j=3, k=5). It will then print out "program start." Then, it will go into the for loop and do the equation f= i+j-k. It will print out what F equals when i is different until i = 5. The code will put each number on its line for easy reading. The loop will end, and the code will print out "program ends."
Program 4: The code will tell the user that the loop has started. It will set i=10 and have a length of 10. The loop will start. Two will be added to i. i+2 and then assigned to the array so that it will be array[i] = i+2. Then the code will subtract two from i and subtract eight from the offset. The code will end the code and tell the user that the code has been completed.

3.0: Symbol Table

Register	Purpose & Labels
$a0	Argument of syscall to print string Argument of move to content other register like $s0
$a1	Maximum number of characters in a string
$v0	1: printing a number 4: printing a phrase 5: user input
$s0	c2: save a value c3: save i value
$s1	c2: save b value c3: save j value
$s2	c2: save c value c3: save k value
$s3	c2: save d value
$s4	c2: save F value
$t0	c2: temporary place for (a+b) c3: temporary place for i+j then $t0-k
$t1	c2: temporary place for (c+d)
$t2	c2: temporary place for (b+3)
$t3	c2: temporary place for (a+b) - (c+d)
$zero	To hold a constant 0

0.4: Learning Coverage

1. For loop
2. Array
3. User input for string and int
4. Storing integers from user's input
5. Printing integers and string

0.5: Test Results

Program 1:

```
Hello, may I have your name, please?
Anna
Welcome, Anna
```

Program 2:

```
Enter value a: 10
Enter value b: 20
Enter value c: 30
Enter value d: 10
F = 13
```

Program 3:

```
Program start
-2
-1
0
1
2
Program ends
```

Program 4:

```
Loop start
Loop ends
```