ACS-HW-1

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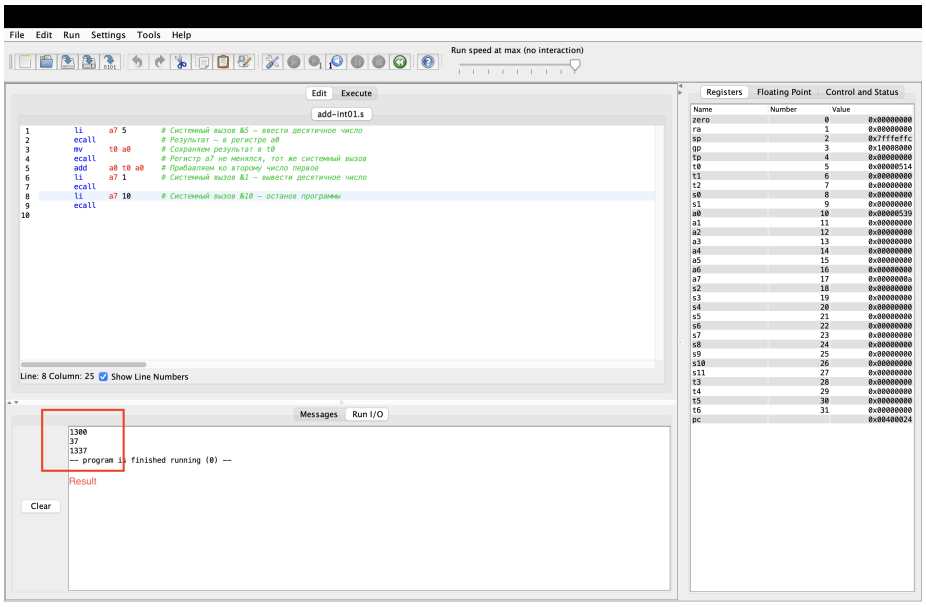
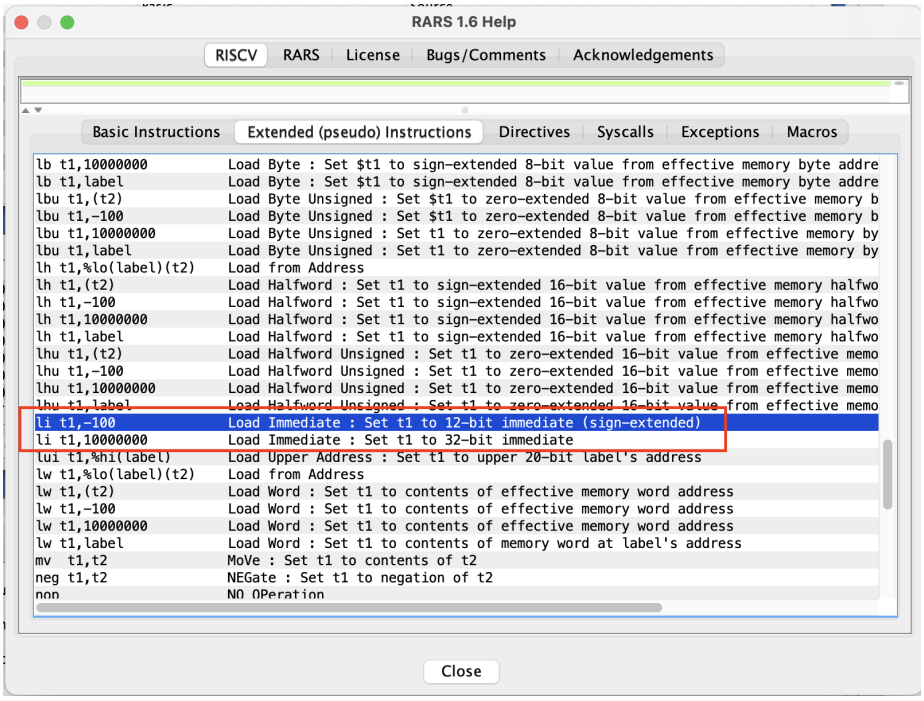
Contents

Homework-1

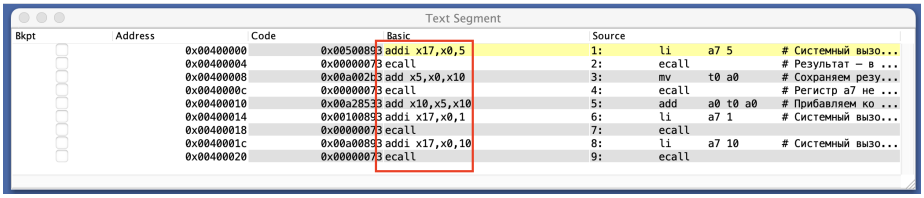
1.1 Task 1



The result of executing the 1st program.



As we can see - li instruction is in the pseudoinstruction section.



After assembling the project in the execution section, we can see that the li instruction has been replaced by a more complex instruction. Therefore, we can conclude that li is indeed a pseudoinstruction.

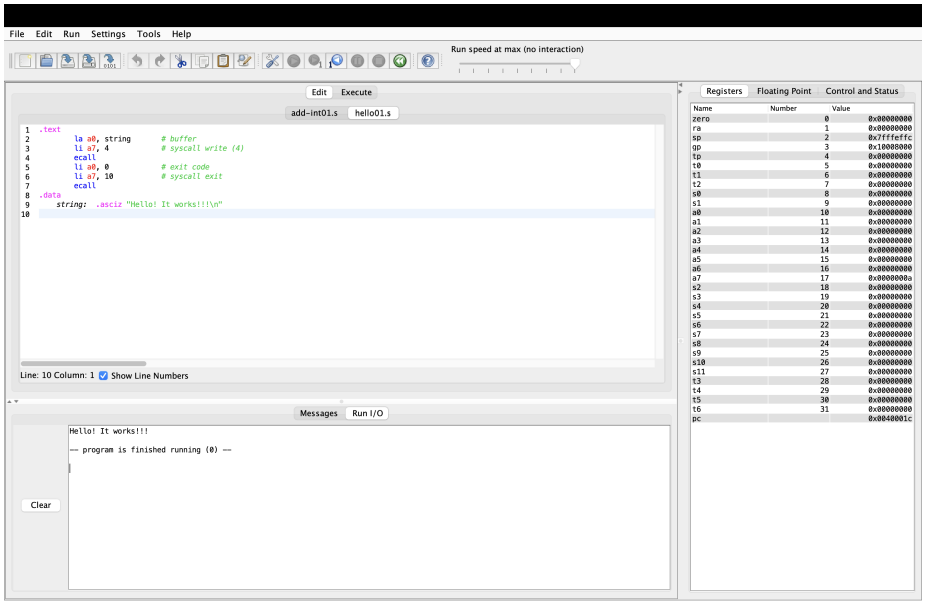
Following the same principle, we determine that mv is also a pseudoinstruction. Conclusion: "li" and "mv" are pseudoinstructions

- li (addi) is I-type (pseudo)instruction
- ecall is I-type instruction
- mv is R-type (pseudo)instruction
- add is R-type instruction

System calls:

- **1.** PrintInt - Prints an integer
- **5.** ReadInt - Reads an int from input console
- **10.** Exit - Exits the program with code 0

1.2 Task 2

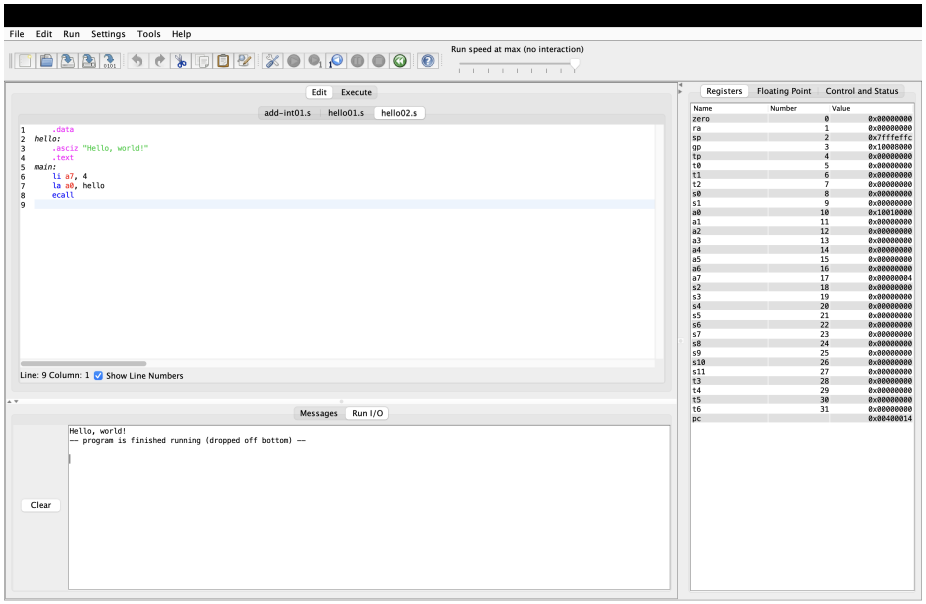


The result of executing the 2nd program.

System calls:

- **4.** PrintString - Prints a null-terminated string to the console
- **10.** Exit - Exits the program with code 0

1.3 Task 3

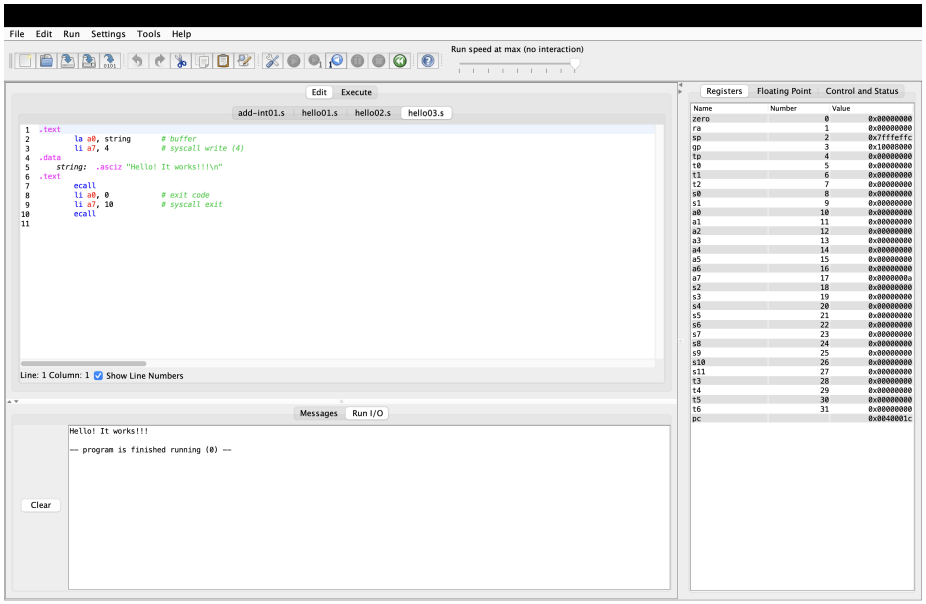


The result of executing the 3rd program.

System calls:

- **4.** PrintString - Prints a null-terminated string to the console

1.4 Task 4

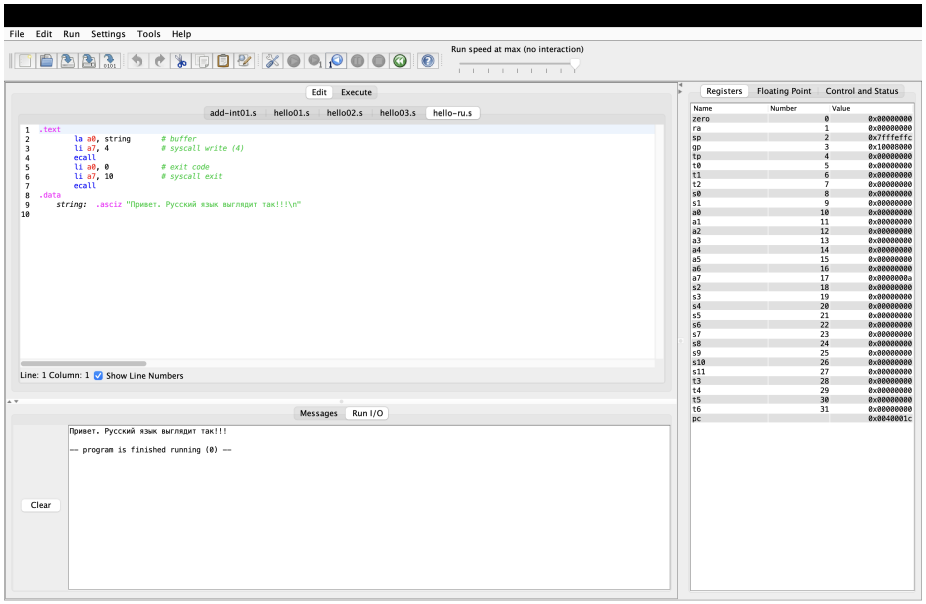


The result of executing the 4th program.

System calls:

- **4.** PrintString - Prints a null-terminated string to the console
- **10.** Exit - Exits the program with code 0

1.5 Task 5

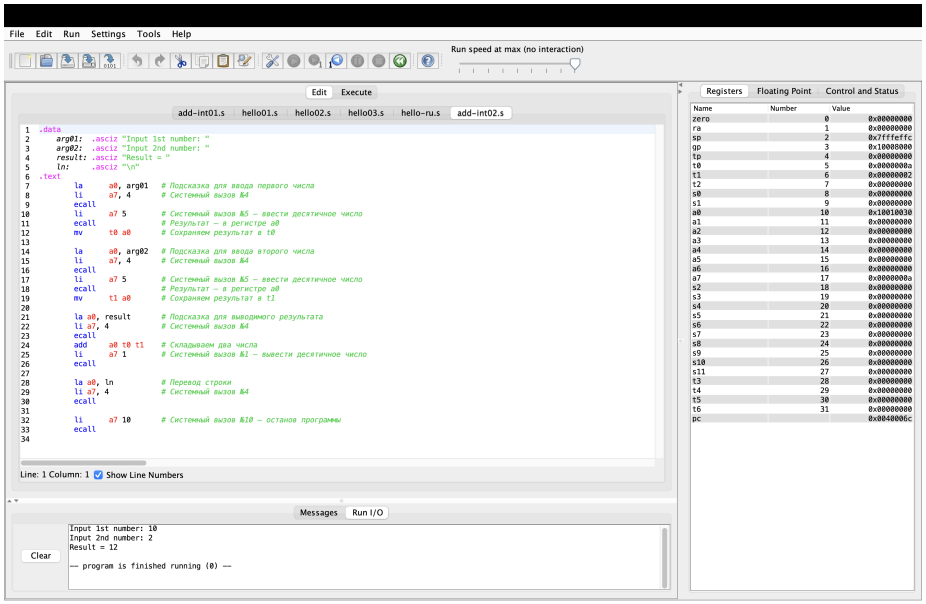


The result of executing the 5th program.

System calls:

- **4.** PrintString - Prints a null-terminated string to the console
- **10.** Exit - Exits the program with code 0

1.6 Task 6



The result of executing the 6th program.

System calls:

- **1.** PrintInt - Prints an integer
- **4.** PrintString - Prints a null-terminated string to the console
- **5.** ReadInt - Reads an int from input console
- **10.** Exit - Exits the program with code 0