The Assemblers
Spring 2019

Developing Soft and Parallel Programming Skills Using Project-Based Learning

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Planning and Scheduling

Assignee Name	Email (@student.gsu.edu)	Task	Duration (hours)	Dependency	Due Date (Oct 26th)	Note
Aaja Christie (Coordinator)	achristie3	Create the Github and the Slack and put Raspbian on the pi. (task 1 and task 4, part a, part of task 3)	3hr	Github and Slack	Feb 3rd	
Davidson Fleurantin	dfleurantin1	Writing the report. (task 5)	3hr	Microsoft Word	Feb 6th	
Mamadou Diallo	mdiallo15	Editing video and upload it to a YouTube Channel (task 6)	3hr	Smartphone camera, Youtube, video editing app.	Feb 7th	Have video uploaded no later than Feb. 7
Sheng Chen	schen36	Planning and Scheduling team member's tasks and assigned due date. (task 1)	1hr	Google Doc.	Feb 4th	
Matthew Kabat	mkabat1	ARM Assembly Programming. (task 4, part b)	2hr	Raspberry PI	Feb 6th	

Teamwork Basics

What to do to get the task accomplished and the team members' satisfaction high?

To get the assignment's task accomplished and the team members' satisfaction high, the group should not just delegate the tasks, each member of the group must pay attention to each member's strength, get to know what they do best and work around that skill. The team must set ground rules during the formation of the team to avoid conflicts. A team's member needs to be the facilitator to get everyone involved, to help meet our deadlines and more. Communication is key to the success of a team. Each member must be able to communicate. When the group communicates, each member understands their role, and each member must make sure they understand what their teammate is trying to convey. Lastly, the team must know how to avoid or solve common problems such as behavioral issues.

Answer all the questions in the Work Norms, Facilitator Norms, Communication

Work Norms

How will work be distributed?
To be fair, the workload must be evenly distributed. However, the degree of difficulty can vary. Since it is a team project, when one is done with his/her task, one can offer his/her assistance to accomplish the team's goal. Each member of the team should account for their own work. If help is needed, then that member should ask for help.

Who will set deadlines?
The coordinator should set deadlines. After inquiring with all the team members on when each task should be done, the coordinator should set the deadlines 48 hours before the project's submission.

What happens if someone doesn't follow through on his/her commitment?
Each member must be accountable, so trust can be established. If that trust is broken, then the group must work with that person to complete the task. New deadlines must set with that person, and individual meeting should be a norm to make sure the task is being done. If that fails, the group will have to re-assign the task to someone else or do the task.

How will the work be reviewed?

Before submitting the work, each member will get a copy of the project. As a group, we will go through all the requirements, making sure they are all met, all the questions answered to the satisfaction of each member.

What happens if people have different opinions about the quality of the work?
People will have different opinions of the work. It is important to establish that line of communication with each other. When the whole project has been reviewed, each member should voice their opinions about the work, the changes they think should be made. The group should discuss all opinions and arrive at a consensus. Compromises will have to be made. Through communication, it is likely the team will reach a decision on how to proceed.

What happens if people have different work habits?
Since it is a joint project, each member of a team must understand that his/her work habits are not more important than another's. for example, one member can consider his/her response to a question as more important. Compromise can be invaluable to a team's success. It shows concern for each member and the respect for someone's ideas and work habits. Each member is as important as the other, that should reflect on how the group goes about completing the work.

Facilitator Norms
The team will use a facilitator. The first facilitator chosen should exhibit some characteristics. That person should be friendly, driven, collaborative, humble, gentle, non-judgmental, focused. The person that demonstrates some of the characteristics will be chosen as the first facilitator. The facilitator position will be rotated. We are learning to work as a team, and it is good practice to learn as many skills as possible. Facilitation styles vary between members, it is a great learning process to watch how team members operate. The responsibility of the facilitator includes:

a. Focus on the content and how conflicts are being discussed
b. Get everyone involved in the project
c. Keep the team on track, preventing deviations
d. Come up with new ideas
e. Help team members deal with deadlines, help carry out smooth, positive interaction
f. Directs the group to a unifying decision

Communication Norms
Communication should take place anytime a member needs directions or conveys an instruction or an idea. Communication through a record-keeping application such as

GroupMe or Slack is best because there will be a transcript of all the discussion. The group is using the application Slack to communicate, to send out reports. The report document is posted on Google Drive so it is accessible to all members of the group. If the document needs to be modified by a member of the group, he/she will do so. This member will notify the group using the Slack application.

As a team, select two cases out of the four mentioned in Handling Difficult Behavior.

Two cases of handling difficult behavior are when someone is two quiet and when someone constantly complains. When a member of the group is too quiet, it is necessary to draw them out by asking them for their input and ideas and to make them feel comfortable sharing their thoughts. To create an environment where naturally quiet people can contribute to the conversation, there should not be any rude or disrespectful comments made about different ideas. In the case where someone is constantly complaining, the group should listen to these concerns and encourage the complainer to play an active role in rectifying the issue.

When making decisions, If the team is having trouble reaching consensus, what should you do?

If the group can not reach a consensus, we should vote on our top ideas narrowing the options every time until we get to the top voted idea or method. This will allow us to come to some sort of agreement and move on to other topics of discussion without leaving matters unsettled.

What should you do if person may reach a decision more quickly than others and pressure people to move on before it is a good idea to do so?

If someone reaches a decision too quickly we should make sure we here everyone's stance on the matter before progressing. Making a hasty decision could have a detrimental outcome in the final result of our project, so letting the member who is a bit less patient about the importance of planning and good decision making is crucial to having a successful project.

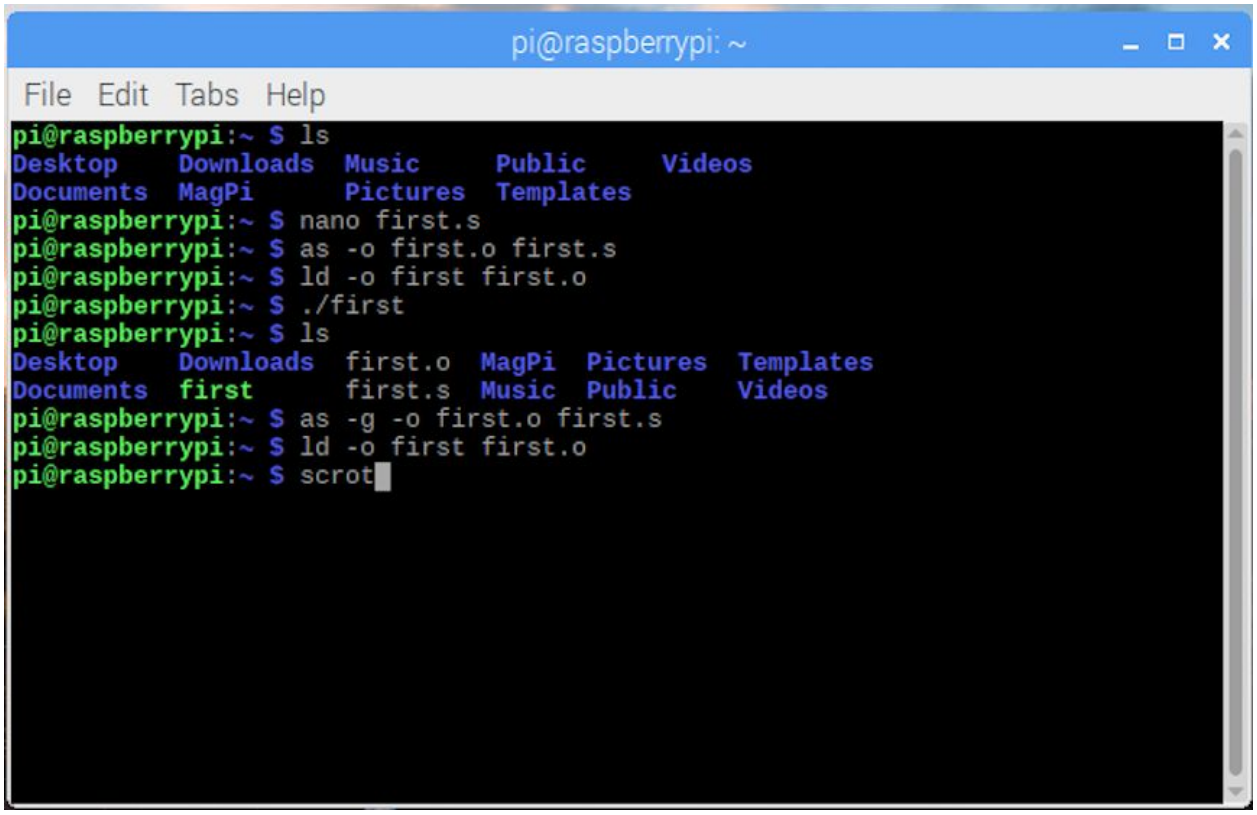
What happens if most people on the team want to get an "A" on the assignment, but another person decides that a "B" will be acceptable?

If someone in our group is prioritizing another class over this one and therefore is alright with getting a B on an assignment. We need to remain in communication and make sure

that person gets a manageable amount of the work so that they can do it with excellence without giving up any success in there other courses.

Task 4

Part 1



There was no output because nothing was being printed to the screen. We had to use the GNU debugger to look at the values in the registers to determine if the program was working properly or not.

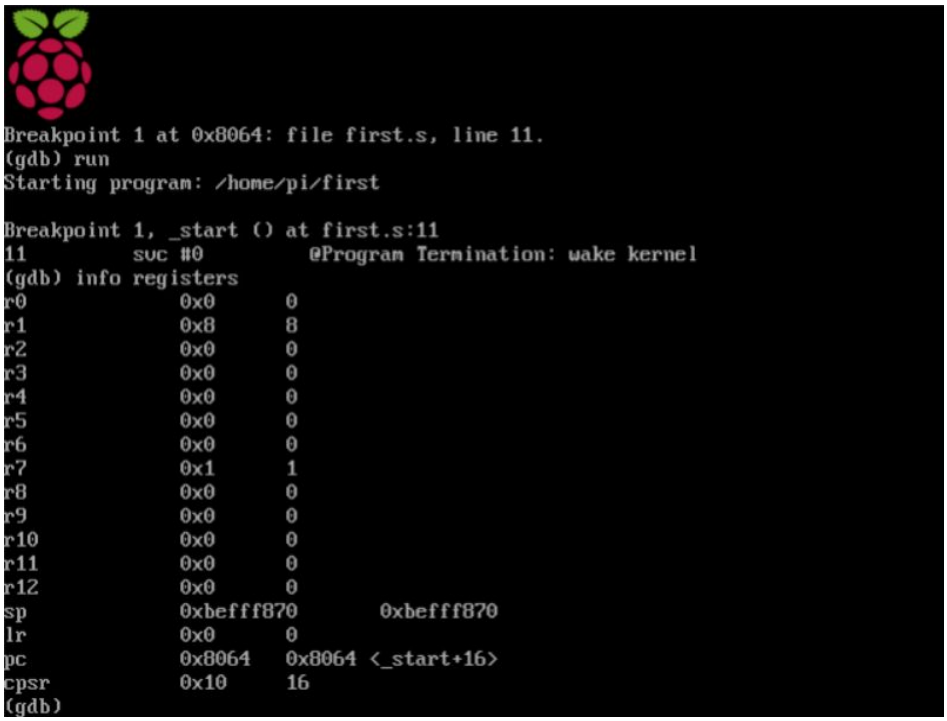
Part 2

```
@first program
.section .data
.section .text
.globl _start
_start:
  mov r1, #5     @load r1 with 5
  sub r1, r1, #1 @subtract 1 from r1
  add r1, r1, #4 @add 4 to r1

  mov r7, #1     @Program Termination: exit syscall
```

```
  svc #0          @Program Termination: wake kernel

.end
```



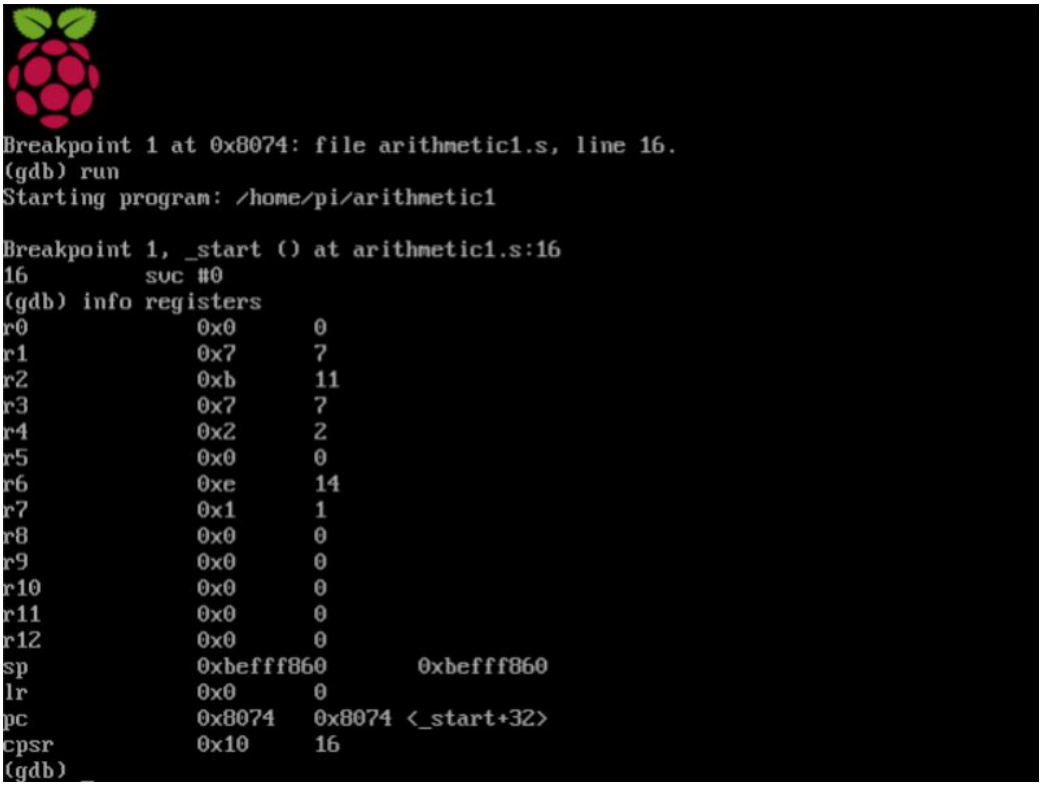
This program was a simple one designed to perform the calculation A = A - B + C. The initial value and all subsequent manipulations were stored in register r1 and yielded a final result of 8. This result can be seen in the screenshot. The actual equation equated to r1 = 5 -1 + 4.

```
@arithmetic1.s
.section .data
.section .text
.globl _start
_start:
  mov r1, #10
  mov r2, #11
  mov r3, #7
  mov r4, #2

  add r1, r1, r2
  mul r6, r3, r4
  sub r1, r1, r6

  mov r7, #1
  svc #0
```

.end

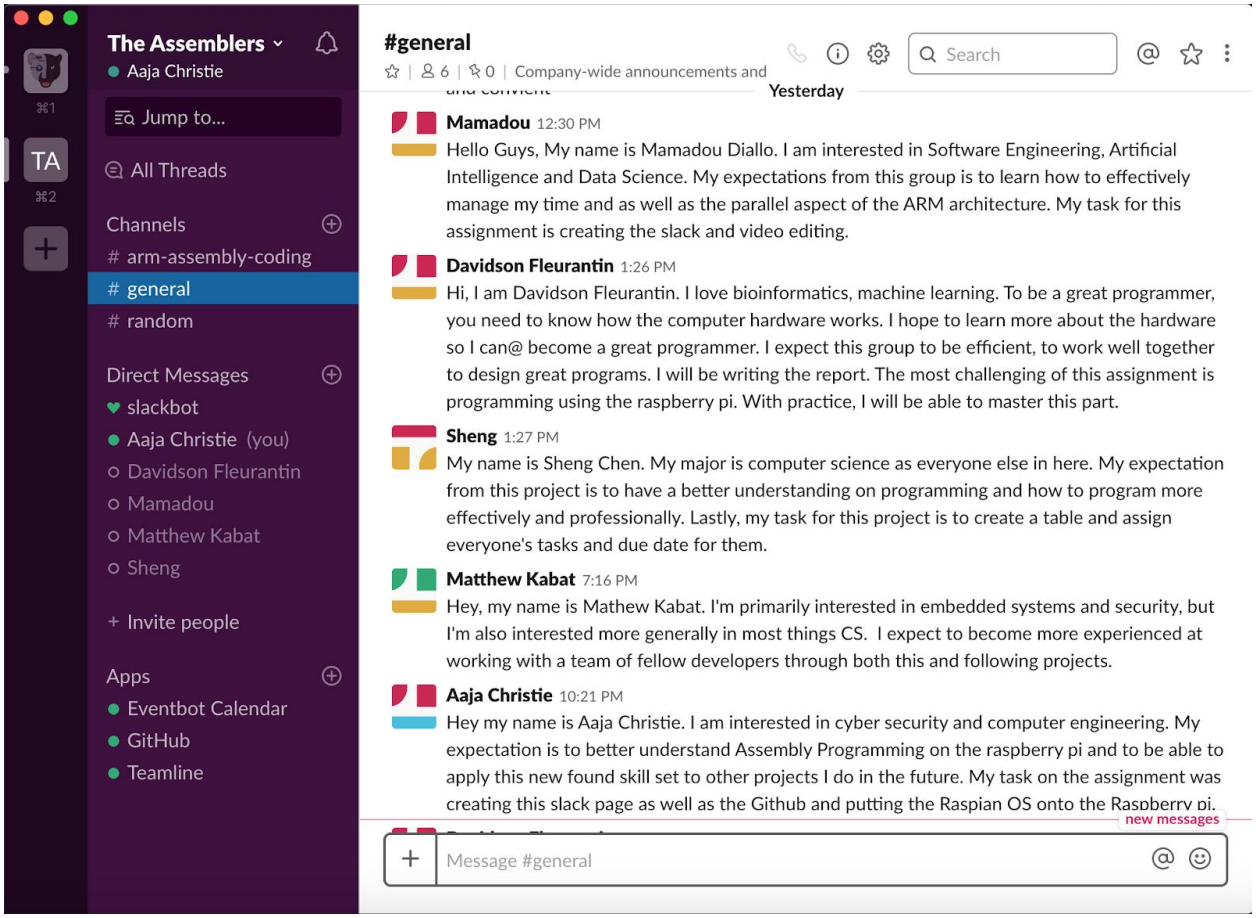


This program was a slightly more complex one designed to perform the calculation A = (A + B) - (C * D). The register r1 through r4 were assigned values of 10, 11, 7, and 2 respectively. The resultant equation could be written out as r1 = (10 + 11) - (7 * 2). The final result of 7 can be seen in the screenshot. Interestingly, the result of the multiplication of r3 and r4 had to be stored in a separate register. It couldn't be done in place.

Appendix

Youtube Channel: [The Assemblers]

Slack: [https://the-assemblers.slack.com/messages/CFSQ2GTDX/]



Github: [https://github.com/TheAssemblers]