

Developing Soft and Parallel Programming Skills Using Project-Based Learning

Fall 2019

Group Name: Kenny and the rest

Group Members: Abdiaziz Dakane, Soojie Chin, Nish Patel, Brett Krokoff, Kehinde Adedara

For planning and scheduling we had to ask for everyone's schedules and what time would work for them. The first time we met we discussed which team members would be in charge of which roles, and what potential times we could meet in the future to work on all the tasks together. This part was the most challenging for our group due to the fact that everyone's schedule rarely aligned. We ended up meeting most days after class to complete the tasks, however we could only do that for a short amount of time, since other classes would get in the way. Even with time constraints, our group was still able to pull through and complete every task together successfully and efficiently. We also planned to finish most of our work a decent amount of time before the deadline, so that we weren't rushing to complete the project and didn't run into any technical or scheduling issues that could set us back. Together, everyone was able to complete their assigned task, and respond in a timely manner to each other, which allowed us to complete this project without any interferences.

For the teamwork basics we all sat around a table and answered them together. Nish led the conversation and typed the document while we all discussed the prompts and answered together. We agreed that the team coordinator would handle all deadlines and who did what tasks so that there would be no confusion between the group. We also went over what we were okay with in the group, such as eating, smoking, being late, and someone dominating a discussion, and we all agreed on ways to handle issues when they arise. Together, we established some basic team rules and guidelines so that we can keep team satisfaction high and get the tasks accomplished.

For the raspberry pi installation, we let Kehinde lead that because he had the proper tools needed to install the raspberry pi. After completing the raspberry pi instruction, and installation process, we were able to interact with the OS directly through the raspberry pi terminal. The second step in the instruction introduced us to how the raspberry pi processes registers and convert files from nano text editor to object file, and then Executable file. We also observed the run time complexity of the raspberry pi, and the steps it takes to transfer and process data as well as the setup it takes to accurately write a code. We have ran into multiple situations in which the raspberry pi wouldn't execute the code because of all "illegal instruction" , or wrong register called.

## Appendix

### Task 1:



Kenny and  
them  
Planning

Name	Email	Task	Duration (Hours)	Dependency	Due Date	Note
Abdiaziz Dakane (Group coordinator)	Adakane1@student.gsu.edu	Creating Github, Slack, and organizing group.	2 Hours	Receiving the Raspberry Pi	09/16/20	Should have everything ready for my team members to do project in time 100%
Brett Krokoff	Bkrokoff1@student.gsu.edu	Make the report and the technical writing	1.5 hour	Depending on slack being done and github.	09/19/20	Receive all the information prior a day before the due date 100%
Soojie Chin	Schin6@student.gsu.edu	Directing the youtube video and uploading it	2-6 Hours To render video	Everyone being there for the video	09/18/20	Conduct the video two days prior due date and find time that works for everyone 100%
Kehinde Adedara	Kadedara1@student.gsu.edu	Assembling the Raspberry Pi	2-3 hours	Group coordinator to hand Raspberry Pi	09/17/20	Make sure the Raspberry is done in time and have a screenshot of it ready 100%

Nish Patel	Npatel1161@student.gsu.edu	Conducting question in the learning teamwork basics and helping other members	2 Hours	Depending on whether the group	09/18/20	Ask all the question every member and find everyone schedule 100%
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Task 2: <https://github.com/Georgia-State-university-Arm/Kenny-and-Them>

Branch: readme-edits ▾ New pull request

Create new file Upload files Find File Clone or download ▾

adakane1 Add files via upload Latest commit b7969c0 12 minutes ago

Kenny and them Grading Table.docx	Add files via upload	12 minutes ago
README.md	Update README.md	15 hours ago

README.md

## Kenny-and-Them

#Project-A1

Project Title: Developing Soft and Parallel Programming Skills Using Project-Based Learning

Team Member: Soojie Chin, Abdiaziz Dakane, Brett Krokoff, Nish Patel, Kehinde Adedara

Georgia-State-university-Arm / Kenny-and-Them

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Assignment 1   
Updated 8 minutes ago

Filter cards Fullscreen

0 To do

0 In progress

5 Done

- Create Slack account and Github then invite members 9/16/19  
Added by adakane1
- Do the Learning Teamwork Basics by tomorrow After class 9/16/19  
Added by adakane1
- Assembling the Raspberry Pi by 9/17/19  
Added by adakane1
- Create the Youtube video by Wednesday

github.com/Georgia-State-university-Arm/Kenny-and-Them/security/advisories



**Brett Krokoff** 12:44 AM

Name: Brett Krokoff

Task: in charge of writing the report

Interest: I'm interested in learning everything there is to know about computers so I can excel in the computer science industry.

Expectations: I expect to become familiar with the hardware of the computer and how it functions as well as how to use a raspberry pi so I can better understand the layers there are to the code we write.



**Kenny** 10:59 AM

Name: Kehinde Adedara

Task:



**Kenny** 11:04 AM

Name: Kehinde Adedara

Task: In charge of Program setup and Installation

Interest: I am interested in innovating microprocessors and A.I which is part of my research.

Expectation: To master the Raspberry Pi board microprocessor, and learning how to control data usage for accessibility and efficiency.

**abdiaziz dakane** 12:10 AM  
 Member Introduction: Name: Abdiaziz Dakane. Task: Group Coordinator and responsible for creating Slack and Github for group members also creating table. Expectations: My expectation from this project is to learn the basics of Raspeberry Pi and learn my group members and being able to work together.

**Soojie Chin** 12:20 AM  
 Name: Soojie Chin  
 Task: Create and upload YouTube video and channel.  
 Interest: Obtain a baseline understanding of all aspects of computer science in order to understand and learn how to create a video game.  
 Expectations: To apply material learned in class to the projects, get to know the group members, and learn how to effectively work as a team despite any conflicts we may come across.

**Nish** 3:18 PM  
 Name: Nish Patel

**Nish** 3:36 PM  
 Task: answer the Teamwork basics Questions.  
 Interest: my goal is to get more knowledge and learn the basics of computer architecture  
 Expectations: to learn from each other and solve problems together

#### Task 4:

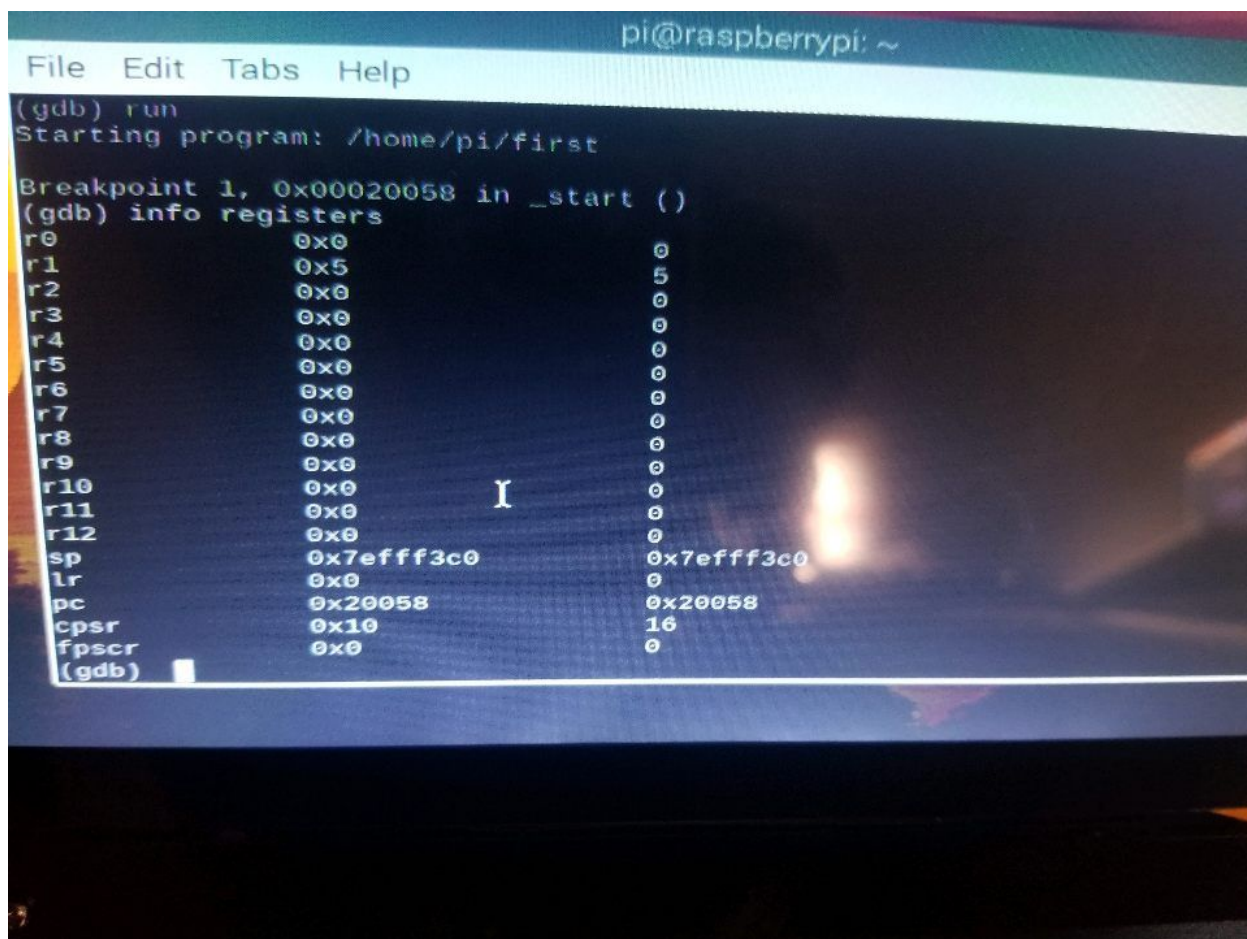
```

GNU nano 3.2 arit.s
first program
.section .data
.section .text
.globl _start
_start:
mov r1,#10 @A register
mov r1,#11 @ B register
mov r3,#7 @ C register
mov r4,#2 @ D register
add r1,r1,r2
mul r3,r4,r4
sub r1,r1,r3

mov r7, #1
svc #0
.end
  
```

[ Read 20 lines ]

^G Get Help    ^O Write Out    ^W Where Is    ^K Cut Text    ^J Justify    ^C Cur Po  
 ^X Exit        ^R Read File    ^\ Replace     ^U Uncut Text ^T To Spell    ^\_ Go To



```
pi@raspberrypi: ~  
File Edit Tabs Help  
(gdb) run  
Starting program: /home/pi/first  
Breakpoint 1, 0x00020058 in _start ()  
(gdb) info registers  
r0          0x0          0  
r1          0x5          5  
r2          0x0          0  
r3          0x0          0  
r4          0x0          0  
r5          0x0          0  
r6          0x0          0  
r7          0x0          0  
r8          0x0          0  
r9          0x0          0  
r10         0x0          0  
r11         0x0          0  
r12         0x0          0  
sp          0x7efff3c0    0x7efff3c0  
lr          0x0          0  
pc          0x20058     0x20058  
cpsr        0x10        16  
fpscr       0x0          0  
(gdb)
```

Task 6: <https://youtu.be/Mi5FhTwwTps>