

U3 Software Engineering lab

Team Details :

- Name : P K Navin Shrinivas [PES2UG20CS237]
- Name : Mohamed Ayaan [PES2UG20CS200]
- Name : Mukund Deepak [PES2UG20CS206]
- Name : Nandan H [PES2UG20CS214]

Problem 1B :

Subquestion 1 : Print statements to see debugs in code :

```
5 //We are using self to obtain the value from the CpuUsage structure as it is being implemented
4 pub fn convert_to_protobuf(&self, req_payload : CpuUsageRequest) -> CpuUsageProtobuf {
3     println!("called , {}", self.calculate_recent_usage());
2     let needed_cpu_id : i32 = match req_payload.needed_cpu_usage.parse(){
1         Ok(n) => { n }
126     _ => { println!("Junk CPU ID usage requested") }
1     };
2     CpuUsageProtobuf{
3         cpu_id : String::from("0"),
4         cpu_usage : self.calculate_recent_usage() as i32,
5     }
6 }
7 }
8
9 pub async fn main_cpu_stat_handler(statefull_cpu_usage: &mut CpuUsage) {
10     loop {
11         //Reading entire file from system
12         let procstat_fd = match File::open("/proc/stat") {
13             Ok(x) => x,
14             Err(_) => {
15                 panic!("Make sure you are using a linux system! Error point[reading stat file]");
16             }
17         };
18     }
19 }
```

The above image shows two print statements according to the point in code the error occurs

Subquestion 2 : Two test cases for valid and invalid cases :

Valid case :

```
[14:08:58] [~/github/SysPerf/SysModule] git:(main*)$ grpcurl -plaintext -import-path ./src -proto data.proto -d '{"needed_cpu_usage": "2"}' localhost:5001 data.protobuf.FetchData/FetchCpuUsage
{"cpuId": "0",
"cpuUsage": 4}
```

```

[14:08:39] [~/github/SysPerf/SysMo
  Compiling SysModule v0.1.0 (/ho
  Finished dev [unoptimized + de
  Running `target/debug/SysModu
Listening on port 5001
Jello
4.958678 168247 168253 2347443
called , 4.958678
4.958678 168247 168253 2347443

```

Invalid case :

```

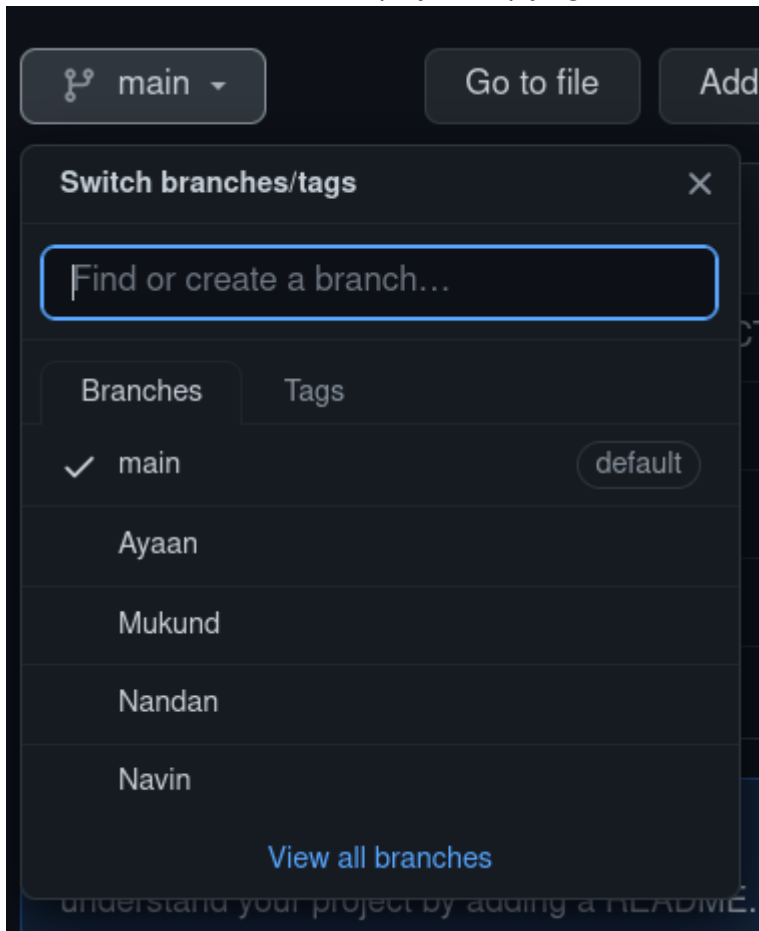
[14:09:00] [~/github/SysPerf/SysModule] git:(main*)>>> grpcurl -plaintext -import-path ./src -proto data.proto -d '{ "needed_cpu_usage" : "A" }' localhost:5001 data.protobuf.FetchData/FetchCpuUsage
ERROR:
  Code: Canceled
  Message: stream terminated by RST_STREAM with error code: CANCEL
[14:09:05] [cost 0.069s] grpcurl -plaintext -import-path ./src -proto data.proto -d '{ "needed_cpu_usage" : "A" }' localhost:5001 data.protobuf.FetchData/FetchCpuUsage

[14:08:39] [~/github/SysPerf/SysModule] git:(main*)>>> cargo run
  Compiling SysModule v0.1.0 (/home/navin/github/SysPerf/SysModule)
  Finished dev [unoptimized + debuginfo] target(s) in 6.20s
  Running `target/debug/SysModule`
Listening on port 5001
Jello
4.958678 168247 168253 2347443
called , 4.958678
4.958678 168247 168253 2347443
3.2786884 168458 168462 2354789
called , 3.2786884
thread 'tokio-runtime-worker' panicked at 'Junk CPU ID usage requested', src/CPUStat/statfuncs.rs:126:20
note: run with 'RUST_BACKTRACE=1' environment variable to display a backtrace

```

Problem 3 :

- We have 4 contributors to the project, implying we have 4 branches + 1 main branch



- Configuration Item table :

Item Name	tracked?	Maintainer	Category	Relation	Description
build.rs	yes	common	build	depends on proto	Works as build script for software
main.rs	yes	common	code	driver code for all modules	Brings together entire program
data.proto	yes	Navin	coupling	build.rs depends on this	Defines protocols for communication
.env	no	common	environment	-	Holds various build env vars
target/	no	common	build	-	All builds go here
CPUStat/lib.rs	yes	Navin	code	main.rs depends on this	defines interface and modules for CPU module
CPUStat/statfuncs.rs	yes	Navin	code	main.rs depends on this	defines functions for CPU module
MEMStat/lib.rs	yes	Ayaan	code	main.rs depends on this	defines interface and modules for MEM module
MEMStat/memfuncs.rs	yes	Ayaan	code	main.rs depends on this	defines functions for CPU module
Cargo.toml	yes	common	build	build.rs depends on this	Defines all modules and crate used for building this software

- Modifying Configuration Items | Ayaan :

Ayaan

Commits on Oct 6, 2022

Added main function to memfuncs.rs

Mohamed-Ayaan358 committed 8 days ago

484ca76

<>

Update memfuncs.rs

Mohamed-Ayaan358 committed 8 days ago

Verified

e4f93ef

<>

Merge pull request #7 from Mohamed-Ayaan358/main

Mohamed-Ayaan358 committed 8 days ago

Verified

867eb20

<>

Merge branch 'main' of github.com:Mohamed-Ayaan358/SysPerf

Mohamed-Ayaan358 committed 8 days ago

4fc6d03

<>

ADDED FOLDER STRUCTURE

Mohamed-Ayaan358 committed 8 days ago

4982a72

<>

Commits on Sep 29, 2022

Ayaan #8

Merged Mohamed-Ayaan358 merged 2 commits into main from Ayaan 8 days ago

Conversation 0 Commits 2 Checks 0 Files changed 0

Mohamed-Ayaan358 commented 8 days ago

No description provided.

Mohamed-Ayaan358 and others added 2 commits 8 days ago

Update memfuncs.rs

Verified

e4f93ef

Added main function to memfuncs.rs

484ca76

Mohamed-Ayaan358 merged commit 823aa63 into main 8 days ago

Revert

main

Commits on Oct 8, 2022

merge

NavinShrinivas committed 7 days ago

7744ab6

<>

testing lazygit

NavinShrinivas committed 7 days ago

2b576eb

<>

Commits on Oct 6, 2022

Merge pull request #8 from mukunddeepak/Ayaan

Mohamed-Ayaan358 committed 8 days ago

Verified

823aa63

<>

Added main function to memfuncs.rs

Mohamed-Ayaan358 committed 8 days ago

484ca76

<>

Update memfuncs.rs

Mohamed-Ayaan358 committed 8 days ago

Verified

e4f93ef

<>

Update memfuncs.rs

Mohamed-Ayaan358 committed 8 days ago

Verified

de292cf

<>

- Modifying Configuration Items | Navin :

This screenshot shows the commit history for the 'Navin' branch. The top commit, highlighted with a red box, is titled 'Fixes to main.rs and Additions to data.proto' by NavinShrinivas, committed 1 minute ago, with hash f13e9e7. Below it, under the heading 'Commits on Oct 6, 2022', are three merge commits from Mohamed-Ayaan358: 'Merge pull request #7 from Mohamed-Ayaan358/main', 'Merge branch 'main' of github.com:Mohamed-Ayaan358/SysPerf', and 'ADDED FOLDER STRUCTURE'.


This screenshot shows the details of a merged pull request #10. The title is 'Fixes to main.rs and Additions to data.proto #10'. It indicates that NavinShrinivas merged 1 commit into the 'main' branch from the 'Navin' branch. A comment from NavinShrinivas, signed-off by 'karupal2002@gmail.com', is visible. The commit hash f13e9e7 is shown. At the bottom, a message states 'Pull request successfully merged and closed' and suggests deleting the 'Navin' branch.

This screenshot shows the commit history for the 'main' branch. The top commit, highlighted with a red box, is a merge of pull request #10 from mukunddeepak/Navin, committed 1 minute ago by NavinShrinivas, with hash b838378. Below it is the commit 'Fixes to main.rs and Additions to data.proto' by NavinShrinivas, committed 2 minutes ago, with hash f13e9e7. Further down, under 'Commits on Oct 8, 2022', are two more merge commits by NavinShrinivas: 'merge' (hash 7744ab6) and 'testing lazygit' (hash 2b570eb).


- Modifying Configuration Items | Navin :

This screenshot shows the commit history for the 'Mukund' branch. The top commit, highlighted with a red box, is titled 'Added First Level Decomposition diagrams' by mukunddeepak, committed 2 hours ago, with hash ec47ce9. Below it, under 'Commits on Oct 15, 2022', are three merge commits by NavinShrinivas: 'U3 progress' (hash a98f7e9), 'Merge pull request #10 from mukunddeepak/Navin', and 'Fixes to main.rs and Additions to data.proto' (hash f13e9e7).



PULL REQUEST FOR MERGING BRANCH Mukund to MAIN WITH RECENT CHANGES #11


Merged NavinShrinivas merged 1 commit into **main** from **Mukund**  now


Conversation 0 Commits 1 Checks 0 Files changed 3

 mukunddeepak commented 2 hours ago

No description provided.

  Added First Level Decomposition diagrams ec47ce9


 NavinShrinivas merged commit 463d5c8 into **main** now Revert


 **Pull request successfully merged and closed**
You're all set—the **Mukund** branch can be safely deleted. Delete branch

Reviews: No review
Assignees: No one assigned
Labels: None yet
Projects: None yet


main


Commits on Oct 17, 2022

Merge pull request #11 from mukunddeepak/Mukund Verified 463d5c8 <>
 NavinShrinivas committed 31 seconds ago

Adding temp test cases to CPU usage type a39fa49 <>
 NavinShrinivas committed 1 hour ago

Commits on Oct 16, 2022

Fixes to async runtime managements type e8dfa6a <>
 NavinShrinivas committed 2 hours ago

Added First Level Decomposition diagrams ec47ce9 <>
 mukunddeepak committed 2 hours ago

Commits on Oct 15, 2022