[toc]

课上测试

ch02

作业题目：gdb调试

学习Linux核心命令

- 完成附件中ch02 “gdb 调试” 任务内容

作业要求（9’）

- 参考课件，针对上面核心命令重复老师的演示内容（3’）
- 选择自己习惯的 AI 工具， 针对上面核心命令，让 AI 给自己生成至少例子，然后自己进行验证，总结（3’）
- 让 AI工具推荐一些重要命令，然后选择自己认为会高频应用的至少 3个命令（重点推荐 echo，od，sort，bc，ls）进行自主深入学习，每个命令不少于 5 个例子，提交验证，实践过程和总结（3’）

作业提交要求 (1')

0. 记录实践过程和 AI 问答过程，尽量不要截图，给出文本内容
1. (选做)推荐所有作业托管到 gitee或 github 上
2. (必做)提交作业 markdown文档，命名为“学号-姓名-作业题目.md”
3. (必做)提交作业 markdown文档转成的 PDF 文件，命名为“学号-姓名-作业题目.pdf”

GDB调试过程

- 作业github链接
- 前期准备

```
root@Youer:~# mkdir test1008
root@Youer:~# cd test1008
root@Youer:~/test1008# git clone https://gitee.com/rocedu/bestidiocs2024.git
Cloning into 'bestidiocs2024'...
remote: Enumerating objects: 202, done.
remote: Counting objects: 100% (202/202), done.
remote: Compressing objects: 100% (184/184), done.
remote: Total 202 (delta 66), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (202/202), 49.49 KiB | 191.00 KiB/s, done.
Resolving deltas: 100% (66/66), done.
root@Youer:~/test1008# cd bestidiocs2024
root@Youer:~/test1008/bestidiocs2024# cd ch02
root@Youer:~/test1008/bestidiocs2024/ch02# cd c
root@Youer:~/test1008/bestidiocs2024/ch02/c# cgdb testgbd
root@Youer:~/test1008/bestidiocs2024/ch02/c# gcc -g testgdb.c
root@Youer:~/test1008/bestidiocs2024/ch02/c# cgdb a.out
```

- 进行GDB调试

```
(gdb) b main
Breakpoint 1 at 0x1175: file testgdb.c, line 6.
(gdb) r
Starting program: /root/test1008/bestidiocs2024/ch02/c/a.out
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".

Breakpoint 1, main () at testgdb.c:6
6       {
(gdb) step
8           int i, n = 0;
(gdb) next
9           pi = &i;
(gdb) print i
$1 = 0
(gdb) display i
1: i = 0
(gdb) b 11
Breakpoint 2 at 0x5555555551a8: file testgdb.c, line 11.
(gdb) tb 13
Temporary breakpoint 3 at 0x5555555551ba: file testgdb.c, line 13.
(gdb) c
Continuing.

Breakpoint 2, main () at testgdb.c:11
11          pi = arr;
1: i = 0
(gdb) c
Continuing.
The sum of 1-50 is 1275

Temporary breakpoint 3, main () at testgdb.c:13
13          for (i = 0; i <= 50; i++) {
1: i = 0
(gdb) b 14 if i == 45
Breakpoint 4 at 0x5555555551c3: file testgdb.c, line 14.
(gdb) c
Continuing.

Breakpoint 4, main () at testgdb.c:14
14              n += i;
1: i = 45
(gdb) print n
$2 = 990
(gdb) clear 11
Deleted breakpoint 2
(gdb) delete
Delete all breakpoints? (y or n) y
(gdb) c
```

```
Continuing.
The sum of 1-50 is 1275
[Inferior 1 (process 216) exited normally]
(gdb) q
```